



Dive into your data to identify measurable insights.



Best in KLAS in BI/Analytics for the 5TH year.



Products and Services for Healthcare

Introduction

Who We Are

Dimensional Insight is a leading provider of business intelligence (BI) solutions. Dimensional Insight provides data integration, reporting, analytics, and dashboard capabilities embedded in our core BI platform as well as a portfolio of analytics focused applications. Founded in 1989, Dimensional Insight has thousands of customer organizations worldwide and consistently ranks as a top performing business intelligence platform by customers and industry analysts in its core market segments.

Engineering and Healthcare Know-How

Engineering excellence provides the foundation to all of our in-house engineered business intelligence solutions. We have unparalleled expertise in software engineering, leading to multiple patents on the technology utilized in Dimensional Insight's solution set.

Dimensional Insight's team of healthcare experts apply their real-world experience to all of our healthcare solutions to ensure that they meet the unique challenges of the healthcare industry to increase efficiency, reduce operating expenses, increase profitability and improve patient care.

Our Philosophy

We believe that by supporting the customer and the employee, the customer and employee will support the continued growth and development of Dimensional Insight. It is that simple. Our leadership team works towards achieving this goal each day — one where voices are heard, team work is valued, and contributions noted.

Dimensional Insight

how we stack up:

**Diver Platform - Five-Time
"Best in KLAS" Winner for Business
Intelligence/Analytics**

Annual Wisdom of Crowds BI Market Study **best in class** for most measures across all categories including sales, value, product, support, consulting, and integrity.

Founded 1989

Privately Owned

100% Organic Growth

Customers 2,600

Deployments in 31 Countries

**Worldwide offices in the USA,
Europe, South America and Asia**

Awards



Five-Time “Best in KLAS” Winner for Business Intelligence/Analytics

KLAS is a research firm on a global mission to improve healthcare delivery by enabling providers to be heard and counted. Working with thousands of healthcare professionals and clinicians, KLAS gathers data on software, services, medical equipment, and infrastructure systems to deliver timely reports, trends, and statistical overviews. The research directly represents the provider voice and acts as a catalyst for improving vendor performance.

Visit www.klasresearch.com to learn more.

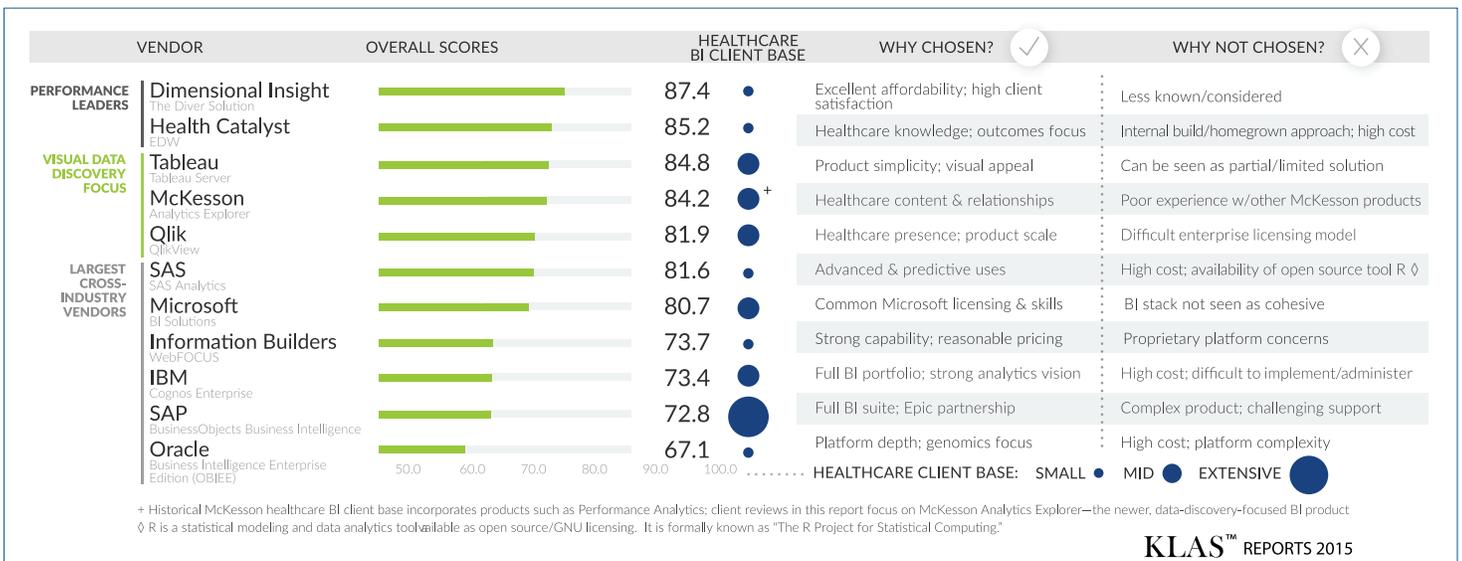


Chart excerpted from KLAS report, “Enterprise Healthcare BI: The Search for Outcomes,” published January 2016



Dresner

Top rankings in Annual Wisdom of Crowds BI Market Study

Dresner Advisory Services’ annual BI and planning reports are based on end-user feedback and are meant to provide a real-world perspective on vendors surveyed. Dimensional Insight has posted strong scores in the survey for six straight years.

Healthcare Analytics — Filling the Gap

Dimensional Insight's Measure Factory™ for Healthcare

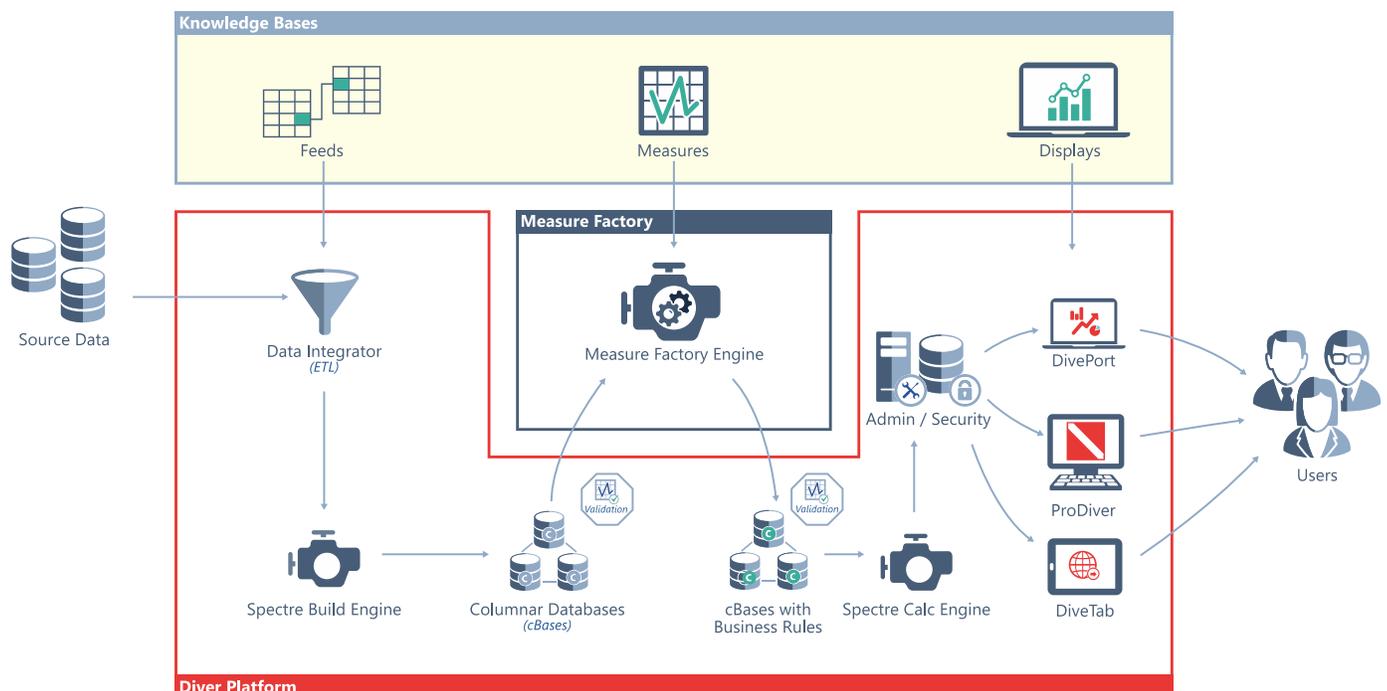
Dimensional Insight has worked with healthcare provider and payer organizations to address their analytics needs for more than fifteen years. Our development and implementation teams have extensive experience creating and deploying solutions that integrate clinical, financial and operational information. The insight gained from solving healthcare information challenges for hundreds of customers has led to a steady progression of innovations in Diver Platform technology. Our understanding of the increasing complex reporting needs has inspired the Measure Factory for Healthcare.

The strategic goals defined by management are selected to drive continuous improvement. To achieve strategic goals managers must define specific measurable targets that reflect the desired progress toward each strategic goal. The Measure Factory builds on the core Diver Platform to provide healthcare organizations the ability to define, manage, and track these measures over time and across the organization. It is not enough to have access to the clinical and transactional data. When users build their own analyses from transactional/clinical source data, meetings are spent arguing about the resulting numbers, rather than making progress toward achieving strategic goals.

Managers and executives must collaborate to articulate and govern the business rules surrounding each measure, and those business rules must be tightly integrated with the BI platform. The Measure Factory ensures that all users view a measure according to the same rules, on the same time-line, and understand how each number was computed.

If a user has a question about a number, the Diver Platform client interfaces provide direct access to the underlying data that was the source of that value. Users can break down the number by any dimension, and “dive” deeper to look for the source of an unexpected variance. Integrity is assured, because the Measure Factory tracks the origin of the data used to produce the measure.

Measures are the numbers that provide perspective into where things stand now and where they may be headed in the future. They help answer questions like: “Are we hitting our targets?”, “Are trends moving in the right direction?”, “Which issues should I be concerned with most?”. Done well, measures provide reliable quantitative evidence to support objective decision making and improve performance. To be truly useful, a measure needs to be more than just a number. A potential user needs to understand what a measure represents, how it is intended to be used and the data used to produce it. The Measure Factory puts information about every measure at the fingertips of every user.



Measure Factory Engine



Governance

The Measure Factory includes several components that aid in the governance process, and ensure that rules are correctly applied. The “Measure Dictionary” captures decisions surrounding each measure – a text definition, as well as the technical source detail for both actual and target information, including multiple components if needed for a ratio or complex calculation. In addition, the dictionary captures information about the analysis required to understand the resulting value – what dimensions, numbers, and filters will users need to appropriately analyze an unexpected variance.

Users can collaborate to determine measures to be tracked, assign teams responsible for the measures, define measures and business rules, and document both the data required for each measure and where the data is located. The Measure Factory ensures that the same definition is used each time a business rule is applied.



Assembly

Once the measures and business rules are defined, the Measure Factory processes data in two phases to ensure consistency and integrity. In the first phase, individual business rules are applied to the appropriate source data, then summarized and cross-populated to other data sets at different levels of granularity. The result of this phase is a series of data sets, in the form of a columnar database (cBases), containing all of the flags and numbers required to build each measure. In the second phase, the appropriate source fields is selected for each measure creating a complete measure-oriented data set. At the same time, a view of the transactional data relevant to each measure is created, ensuring that the data used to analyze a number on a dashboard will be the same data used to produce that number.



Validation

Validation occurs in several phases of a Measure Factory implementation. Before data enters the Measure Factory, it must first be extracted and compiled into cBases. The cBases are validated on a “counts and amounts” basis to their source systems, to ensure faithful replication of operational and financial data. In the governance process, business rules are validated in real time using traditional BI methods – each rule is tested by interactive analysis of the cBase that will be used to produce it. This immediate feedback allows for a rapid, iterative process between business, technical, and operational users. Finally, the resulting measure values are validated against previously identified validation documents (typically existing reports) to ensure correct application of the measure definition to the business rule components.

Knowledge Base



Data Elements

Data elements are the building blocks used in constructing measures. A data element may be extracted from a system of record, such as an EHR, or derived from a standard reference data set. Examples of basic data elements include the amount charged for a procedure and the numeric value of a lab test result. By itself, an individual data element may be limited in its meaning or potential use – that is until business rules are applied to it.



Standard Measures

Dimensional Insight provides pre-programmed templates of standard measures and business rules. A definition outlines what is being measured, how it should be interpreted, what it can be compared with and who can provide additional perspective. It also provides the specification for implementing the measure. Where possible, it also lends insight into the decision making process that led to the current version of the measure. A definition’s implementation specification references the two other essential ingredients: data elements and business rules.



Standard Business Rules

Standard Business Rules transform data elements into more useful information. They apply additional logic to one or more data elements or alternatively cross-reference data element values with corresponding reference values. Business rules represent the bridge between raw data and true meaning. A simple business rule might be ALOS. A more advanced example may involve calculating a complex quality measure, which may reference many data elements and other business rules in its calculation.



Diver Platform™

Providing all of the components needed to implement and deploy actionable, role-based BI across your organization

Healthcare providers employ dozens of disparate data sources to capture all kinds of data. Assembling this data into a single actionable format can be difficult, costly, and time-consuming. Dimensional Insight conquers this challenge with our “Best in KLAS” Diver Platform.

The Diver Platform’s flexible end-to-end enterprise-wide reporting and analytics provides all of the components needed to implement and deploy actionable, role-based BI across your healthcare organization. The Diver Platform makes data integration easy and gives key stakeholders a complete understanding of their data, enabling them to identify insights, transform these insights into measurable actions, and improve performance.

The Diver Platform’s ETL module (Extract, Transform, and Load) integrates data from multiple disparate sources and in multiple formats. It is used to create calculations and flags based on the source data and otherwise prepares the data to be built into DI’s reporting objects: columnar databases. Diver Platform’s Spectre™ module creates columnar databases (cBases) using patented cross-indexing technology. The cBases provide quick access to summarized information with complete access to underlying data all the way to the detail level, such as: encounters, orders, or claim lines. Dimensional Insight hospital clients have cBases with hundreds of millions of records.

The Diver Platform is unique in its ability to allow users to “dive” in any direction they wish without the limitations of preset drill paths or hierarchical constraints found in conventional BI tools. Diving is a simple point-and-click operation: No SQL queries, scripting or programming is required to explore and analyze data.

The Diver Platform does not require the additional expense of creating a separate data warehouse, or the licensing overhead associated with a database. Because the Diver Platform integrates data from any number of disparate sources, users can compare, for example, data collected from clinical, operational and transactional systems with information in the data warehouse and legacy data sources or spreadsheets and flat files.

The Diver Platform’s security module handles user authentication and access control based on the user, group, and role, at the object, column, and row levels. The security functionality is robust, meeting HIPPA requirements, including logging.

Dimensional Insight’s Diver Platform patented indexing technology and strategic use of in-memory technology are the reasons Diver users experience consistently fast response times, even when “diving” into Big Data.



Powerful analytics, integration, and dashboard capabilities

- Browser-based and disconnected analytical clients
- An extensive suite of data visualization options
- Ad hoc analytics that facilitates data exploration from a point-and-click interface
- Interactive dashboards for disseminating metrics and indicators
- Information-rich multi-screen applications
- Robust security and content control features
- Delivers consistent user experience across tablet, desktop or laptop



Hassle-free administration and maintenance

- Real-time alerts, event scheduling, and automated report distribution
- Centralized account administration and security
- Self-service report generation minimizes IT support requests
- No database required to host data models

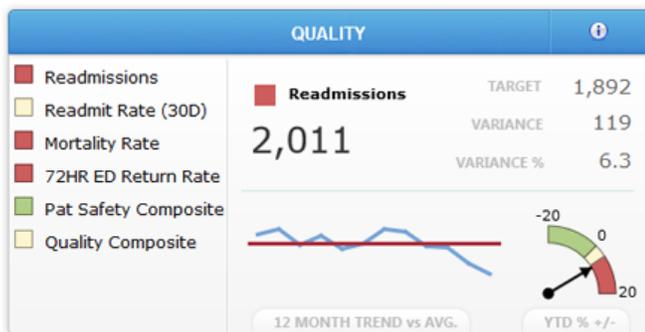
Facility All Values (3)

Calendar

Year-to-Date Summary

Beginning Month: 2013-01

Ending Month: 2013-07



ETL Data Integrator:

Diver Platform's integrated Extraction, Transformation, and Loading (ETL) tool provides quick and easy access to data from a variety of sources: transactional databases, flat files, ODBC-compliant databases, Microsoft Excel® spreadsheets and data from a wide-range of ERP, EHR and operational systems. The robust ETL engine extracts the data from the source system(s), combines and transforms that data, and applies business rules to create complete, validated data sets that deliver consistent, accurate information across the enterprise.



Spectre™ Engine (Columnar Database):

Spectre is a new generation data engine for Dimensional Insight's Diver Platform engineered — for speed. A columnar database (cBase) structure stores data in columns instead of rows, placing the information needed for each individual query in close proximity in memory. The program is then run against the column-oriented data in memory, producing results at mind speed. Spectre is highly scalable and can handle the largest data sets healthcare organizations produce.



DiveLine Admin/Security:

DiveLine server provides enterprise-level control of your BI information. Users are authenticated directly, or against active directory or other systems. Once granted access to the system, users are assigned groups and/or role-based properties, which are in turn used to control access to information. Access to data can be controlled at the cBase, column, row, page, or portlet level, for any user, group, or property value. This ensures that administrators can define access control rules at the right level, and allows the addition of new users based on groups and roles.

Healthcare Applications

HealthcareAware: Gain insights from healthcare data sets and measures.

From the varied data sources to the differences in how key metrics are measured and managed – isolating relevant data to make decisions capable of impacting quality and the bottom line is a tall order that requires the right foundation. This scalable framework incorporates data integration, data validation, business rules, and user-ready views under a single solution set. We package up everything a health system needs to excel on its BI deployment while providing a project-based entry point determined by your current level of readiness.

Physician Performance Advisor: Monitor and improve clinical practice patterns.

Physician Performance Advisor is a physician scorecard that provides a consolidated view of physician performance to align physicians with management and identify areas for improvement. Administrators and physicians can measure and evaluate physician performance from a single, integrated web application. Users have the ability to “dive down” to analyze cost, length of stay, and readmissions improvement opportunities in aggregate as well as by facility, specialty, practice group, and individual physician.

Surgery Advisor: Manage OR facilities and resources more efficiently.

Operating room directors can access timely operational, financial and clinical metrics they need to manage an operating room. Users can analyze and compare practice patterns of utilization, efficiency, costs, and outcomes of individual surgeons, services, and facilities to reveal improvement opportunities to manage cost and capture more revenue.

Meaningful Use Advisor: Measure, analyze, and attest from a single application.

Meaningful Use Advisor is certified for all 29 Stage 2 Clinical Quality Measures. Continuously monitor hospital performance relative to compliance targets, and set thresholds and alerts. Quickly isolate key data points for investigation with exception indicators. Archive historical data sets for audits, research, and analysis in an ad hoc manner. Calculate and submit clinical quality measures to meet Meaningful Use Stage 2 reporting requirements. Dive from a measure to the underlying patient encounters and investigate variances. Identify patterns within patient populations including quality compliance to seek out areas for improvement.

General Ledger Advisor: Investigate financial data.

Minimize reliance on IT support for data extraction and report generation by automatically bringing financial data together from stand-alone accounting systems, payroll, time & attendance systems, and more. Give managers the ability to investigate financial data with integrity and confidence. Quickly access transactional data behind GL entries and analyze cost and revenue data to improve expense management and profitability. The application's built-in secure role-based privileges ensure the right people have access to the right information. Access privileges to sensitive data are completely customizable by a department, reporting structure, user or role. Dashboards and embedded analytics provide at-a-glance comparisons between budget and actual. Access any available detail, including accounts payable, materials management, and GL line items even if data is sourced from different systems.

PHYSICIAN: ANTHONY, HECTOR, MD (0000001583)
 ROLE: All

HOSPITAL: All Hospitals
 SPECIALTY: FAMILY PRACTICE

TIME FRAME: 06 Months
 CURRENT: 2012-11 TO: 2013-04
 PREVIOUS: 2012-05 TO: 2012-10

Select Performance Activity Summary Profile Comparison

Activity

	Cur	Prev	+/-	% +/-
Inpatient Cases	14	9	5	55.5
Observation Cases	0	0	0	0.0

Utilization

	Cur	Prev	Observed	Expected	Index
Avg LOS	3.5	5.0	3.5	3.3	1.04
Cost	6,334	8,648	6,371	9,637	0.99
Case Mix	1,1164	1,3577	0.0000	0.0000	0.89

Professionalism

	Cur	Prev
Patient Complaints	0	0
Behavior Issues	0	0
HP-Consult Note	1	0
Illegible Handwriting	0	0
Positive Comments	0	0
Referred for Peer Review	0	0

Outcomes

- Readmits
- Readmit Rate
- Mortality
- Mortality Rate
- Quality Measures
- Heart Attack
- Pneumonia
- Surgical Improvement
- Heart Failure
- Patient Satisfaction
- Courtesy & Res
- Explain Clearly
- Listen Carefully

Efficiency Utilization Financials

Cur: 2013-01 to 2013-11
 Prev: 2012-01 to 2012-11

Facility: Addison East Unit Code: H05 Unit 1 Period: YTD

Case Volume

Cur	Prev	% +/-	% Prev Period
2,878	2,667	7.9	

Room Turnover Time (Minutes)

Cur	Prev	% +/-	% Prev Period
15	14	3.1	

Pct In-Block Minutes

Case Minutes

Department P/L Comparison Divisor Analysis 24 Mo. Trend Analysis

Profit/Loss Responsibility and Key Ratios

Fiscal Year: 2012 Company: 040 Northlake Hospital Director: All Values (87)
 Year-Month: 2012-04 Vice President: All Values (21) Department: All Values (358)
 Detail: Hide Detail

	Current Month			Year To Date				
	Actual	Budget	Percent Variance	Prior Yr Actual	Actual	Budget	Percent Variance	Prior Yr Actual
Revenues								
Patient Revenue								
ROUTINE REVENUE	31,591,642	33,093,261	-4.54%	27,513,984	237,726,146	239,104,701	-0.58%	199,078,206
ANCILLARY REVENUE	101,432,387	103,268,500	-1.78%	100,006,151	748,407,105	738,125,464	1.39%	714,715,631
INPATIENT REVENUE	133,024,029	136,361,761	-2.45%	127,520,135	986,133,250	977,230,165	0.91%	913,793,837
OUTPATIENT REVENUE	101,929,365	105,105,968	-3.02%	96,644,019	698,999,562	705,460,996	-0.92%	645,041,181
TOTAL PATIENT REVENUE	234,953,394	241,467,729	-2.70%	224,164,154	1,685,132,812	1,682,691,160	0.15%	1,558,835,018
DEDUCTIONS	(151,231,140)	(160,828,857)	5.97%	(123,320,006)	(1,083,114,567)	(1,122,467,797)	3.51%	(945,244,880)
Other Revenue								
OTHER OPERATING REVENUE	1,863,317	1,799,598	3.54%	1,160,341	9,394,266	9,448,859	-0.58%	9,028,914
TOTAL OPERATING REVENUE	85,585,571	82,438,470	3.82%	102,004,489	611,412,511	569,672,223	7.33%	622,619,052
Expenses								
Salaries								
TOTAL SALARY EXPENSE	27,176,570	24,120,713	12.67%	18,071,886	173,480,187	169,091,397	2.60%	150,553,359
Benefits								
PAID TIME OFF	2,833,155	2,235,356	26.74%	6,374,643	19,488,140	17,287,404	12.73%	35,548,803
OTHER BENEFITS	9,163,054	8,448,858	8.45%	8,230,776	55,541,649	55,551,573	-0.02%	51,595,537
Total Benefits	11,996,210	10,684,214	12.28%	14,605,420	75,029,789	72,838,977	3.01%	87,144,340
TOTAL SALARIES AND BENEFITS	39,172,780	34,804,926	12.55%	32,677,306	248,509,976	241,930,374	2.72%	237,697,699
Supplies								
OPERATING SUPPLIES	1,565,147	1,639,129	-4.51%	1,882,047	10,814,349	11,834,554	-8.62%	11,886,280
MEDSURG SUPPLIES	11,837,933	11,133,159	6.33%	12,078,163	78,871,441	80,114,708	-1.55%	77,101,303
DRUGS	2,596,001	3,556,536	-27.01%	2,417,350	19,996,944	24,246,334	-17.53%	21,531,277
Total Supplies	15,999,081	16,328,825	-2.02%	16,377,560	109,682,734	116,195,597	-5.61%	110,518,860
Other Expense								

Capabilities and Services

Healthcare organizations use the Diver Platform for:

Finance	Clinical	Operations
<ul style="list-style-type: none">• Approaching Overtime Alerts• Denials Management• General Ledger• Payroll Analysis• Physician Practice Management• Product Line Analysis• Productivity Reporting• Staffing Requirements Forecasting	<ul style="list-style-type: none">• Chronic Care Patient Alerting• Critical Labs Reporting• Disease Management• Intervention Monitoring• Meaningful Use Compliance• Patient Satisfaction• Physician Scorecards• Quality / Outcomes Reporting	<ul style="list-style-type: none">• Asset Utilization• ED Service Reporting• EHR Reporting• Inventory Efficiency• Membership & Referral Analysis• Physician Preference Items• Population Health• Strategic Planning

Business Intelligence Consulting

Our consultants employ best-in-class project delivery practices to design, implement, and customize your application. Our global team of consultants works exclusively on business intelligence projects, focusing on issues relating to information delivery systems. Our consultants draw on their extensive knowledge to deliver optimal results, quicker implementations, and cost savings for our clients.

Flexible Training Options

Training is provided to help users, developers, and IS/IT staff fully understand and benefit from the power of our solutions. Courses are delivered at our Corporate Education Center in Massachusetts on-site, at a customer facilities, or online. Courses can also be customized to meet specific customer needs.

Customer Support

We partner with each of our customers to ensure rapid implementation of all business intelligence and information delivery project initiatives. Our world-class group of consulting, training, and support professionals are well versed in all of our products. Dimensional Insight's professional services team offers an array of services that span the entire project life cycle — from needs assessment to system maintenance. Our service staff brings the right expertise and process knowledge to the task at hand to maximize return-on-investment and minimize risk.

Success with the Diver Platform



"Diver was the platform that allowed us to integrate our data from several discrete information sources: materials management, our charge entry system, our surgery scheduling, and our decision support systems as well."

Manager of Strategic Planning and Business Development



Diver enables us to get information into the right hands at the right time and do so more quickly and cost-effectively than could other business intelligence solutions we considered,"

Chief Technology Officer



"Dimensional Insight's deep expertise in healthcare, and their commitment to helping their customers succeed, was apparent from the first discussion."

Vice President of Financial Planning



"I can not say enough about what the benefits are to using Diver. For me, there are not many systems — and I have seen my share of them over the years — where you can take existing information, mine what you want and then apply that on a real-time basis."

Chief Operating Officer



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