TechBridge

How to Rule Seasonality with Analytics

Using Analytics to Get a Pulse on the Health of Your Emergency Department

How the Pandemic Has Impacted Businesses
(And How to Use Data to Adapt)

"R" You Ready for Predictive Analytics?

TechBridge

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How to Rule Seasonality with Analytics

Seasonality analytics encompasses the occurrences of factors that are unique to a specific time, condition, or planning for an event that could occur like a natural disaster. In this article we asked three Dimensional Insight experts from our beverage alcohol, healthcare, and partner sectors to discuss the use of analytics to the plan and report on the effects of seasonality within their markets.

Manage inventory with seasonality analysis

Sales in goods and services and especially beverage alcohol are very holiday/season skewed. Typically, 60 % of wine and especially spirit sales take place during the holiday season. Sales escalation can also occur during holidays throughout the year such as Valentine's Day for champagne or Cinco de Mayo for tequila.

Typically, distributors and suppliers (wineries, distilleries, importers) of beverage alcohol will stock up prior to these time periods to support demand.

Managing the inventory needed, last year's sales and current trends help these companies determine what to purchase/sell and when.

Below are two examples of how companies analyze this information. The first is an inventory and goal management dashboard and the second is a dashboard allowing the user to compare any dates in time versus a prior period to understand what their future needs are based on specific holiday bumps such as those that take place during Thanksgiving.

Nancy Berkowitz

Industry VP
LinkedIn

Inventory and goal management dashboard

Days Inventory   Internal Inventory   Order Planning

Current Date 2018-Sep

Distributor Inventory Planning Report

Distributor	Brand	Cases YTD	Cases Last YTD	Cases YTD +/-	Cases YTD +/- %	Goal YTD	% of Goal Made	Cases to Make Goal	Cases Next 60 Days Last Year	Cases To Make Next 60 Days LY	Inventory	On Order	Total Inv Availabl	Order for Goal YTD + 60 Days	Days of Inv Depl	Days of Inv Next 60 LY
Subtotal		1,515,3...	1,379,148	136,227	9.9%	1,443,...	105	0	345,723	345,723	264,579	67,914	332,493	13,230	32	46
980 - Navy Exchange, Nex Bah Whse. (439517)	CHAPOUTR	2	2	0	0.0%	1	200	0	2	2				2		
	TAYLOR	9	9	0	0.0%	8	113	0	9	9				9		
980 - Navy Exchange, Nex Bah Whse. (439517) Total		**11**	**11**	**0**	**0**	**9**	**122**	**0**	**11**	**11**				**11**		
983 - NAVY SE RETAIL DIST (Z0011)	BERINGER	29	23	6	26.1% ▲	21	138	0	3	3	0	0	0	3		0
	CHAPOUTR		2	-2	-100.0% ▼			0		0				0		
	CMPO	5	19	-14	-73.7% ▼	4	125	0		0				0		
	DI MAJO	33		33		27	122	0		0	0	0	0	0	0	
	J AND B	37	62	-25	-40.3% ▼	29	128	0	19	19	0	0	0	19		0
	JADOT	26		26		22	118	0		0				0		
	RNDLL	2		2		0		0		0	0	0	0	0		
	SANDEMAN		21	-21	-100.0% ▼			0		0				0		
	SAUZA	14		14		11	127	0		0	0	0	0	0		
	SOUVRN	20		20		16	125	0		0	0	0	0	0		
	TAYLOR	229	191	38	19.9% ▲	216	106	0	41	41	0	0	0	41		0
	YUKON JACK	43	22	21	95.5% ▲	34	126	0	4	4	0	0	0	4	0	0
983 - NAVY SE RETAIL DIST (Z0011) Total		**438**	**340**	**98**	**29** ▲	**380**	**115**	**0**	**67**	**67**	**0**	**0**	**0**	**67**	**0**	**0**
997 - NAVY EXCHANGE, NAPL	CHAPOUTR	7		7		5	140	0		0				0		

NetDiver   ProDiver   Excel   PDF

| RAD Ad Hoc | Date Range Analysis | RAD by Month | Multi Column | **Two Period Comparison** | Chain Compliance | Sales Rep Share |

| New/Lost Accts | Where To Buy | Repeat Accounts | 2 Brand Compare - RAD | Account Universe | RAD POD | Event Analysis |

Current Start 2016/10/01   Current End 2016/12/30   Prior Start 2017/10/01   Prior End 2017/12/01

Summary   9L Cases

RAD: Two Time-Period Analysis

Brand	9L Cases Current	9L Cases Prior	Current vs Last +/-	Current vs Last % Chg	
Totals	**9,679**	**6,275**	**3,404**	**54.2%**	
MIRASSOU	2,474	1,927	547	28.4%	▲
VENDANGE	1,009	760	249	32.8%	▲
KOSTA BRWN SONM	686	694	-7	-1.1%	▼
CASA NOB ANJ 2Y	489	267	223	83.4%	▲
ABSOLUT		232	-232	-100.0%	▼
FRANZIA	275	223	52	23.2%	▲
SMIRNOFF	319	185	135	72.9%	▲
ROSATELLO MSCT	276	177	99	56.1%	▲
SEAGRAM	214	169	45	26.8%	▲
ANSLMI	235	165	70	42.1%	▲
KRACHER AUS CUV	199	145	54	37.5%	▲
R MONDAVI	221	106	114	107.5%	▲
STELLINA DI NOT	88	98	-9	-9.6%	▼
STERLING	176	91	85	93.7%	▲
BV	66	86	-20	-23.0%	▼
EMMETS	44	48	-4	-8.2%	▼
KAHLUA	73	47	26	54.9%	▲

Excel   PDF

Optimize hospital staffing and resources with seasonality analysis

Among the many fascinating aspects of modern healthcare analytics is how massive volumes of information and what's come to be known as "big data" can illuminate patterns and signals that would otherwise go undetected. Those patterns can often provide insights into what is quite likely to happen in the future. In healthcare one example of this is the predictable nature of patient arrivals to a hospital's emergency department.

Increased activity on Mondays and during full moons may seem like old wives' tales, but it is well born out in the data. The months that are most prone to flu outbreaks, for example, are also likely to have higher demands on healthcare resources. Once an outbreak or similar event actually occurs, future predictions can be further refined using specific historical comparisons. Factoring in consistent day of the week

George Dealy

VP, Healthcare Solutions
LinkedIn

and seasonal patterns can help to optimize hospital staffing to levels that provide high quality care while also keeping costs down. That same information can also be used to efficiently schedule other activities, such as elective surgeries, to balance availability of healthcare resources with forecasted demand. And as even more data become available and analytical techniques continue to improve, the precision and reliability of these predictions will continue to increase.

Emergency Department Census Dashboard

Back   Home   ED Census

Current Hourly | Past Hourly | Historical | Shift

Last Refreshed: Friday, June 15, 2018 at 18:35

ED Facility **SPRINGFIELD HOSPITAL**   Census ED Location **All Values (2)**   Reset

Current Hour: **18**

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ED Census	10	12	10	7	4	3	1	3	6	6	7	11	14	16	13	15	12	10	11	10	5	5	3	0
ED Arrivals	3	2	1	0	0	1	0	2	3	2	5	4	4	2	2	3	1	1	3	1	1	1	0	0
ED Departures	4	0	3	3	3	2	2	0	0	2	4	0	1	0	5	1	4	3	2	2	6	1	2	3
ED Census LOS Avg	198	129	225	277	416	306	636	32	37	84	77	25	60	91	182	142	229	270	227	218	390	112	234	
ED Cur Holds Today	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
ED Census Admits	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

ED Census

Legend: ED Census Today | ED Census Yesterday

ED Census LOS Avg

Legend: ED Census LOS Avg Today | ED Census LOS Avg Yesterday
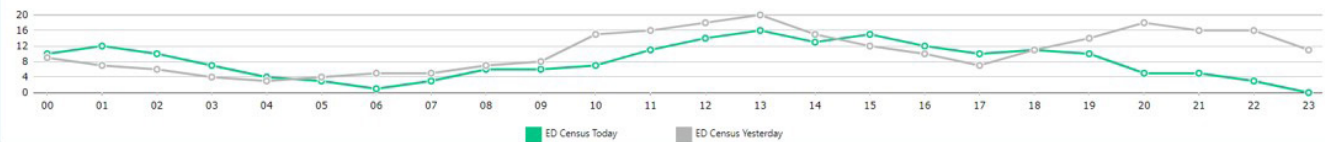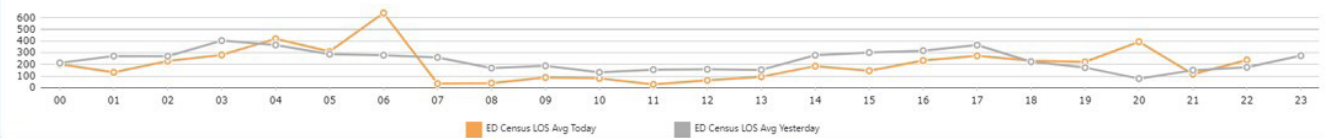
Patient Turnover Activity

Legend: ED Arrivals Today | ED Departures Today

Emergency Department Forecast Dashboard

Dimensional INSIGHT ED Forecast

ED Facility SPRINGFIELD HOSPITAL   Year 2018 Quarter 2   Day of Week All Values (7)   # of Days: **74**

2018/05/02
Actual ED Visits: 164
Predicted ED Visits: 169
Difference between Actual and Predicted ED Visits: -5

Legend: Actual ED Visits | Predicted ED Visits | Difference between Actual and Predicted ED Visits

Allocate budgets with seasonality analysis

In many organizations monthly budgets or forecasts are determined by simply dividing the annual budget evenly across the year. This doesn't recognize the role of seasonal fluctuations that impact many industries.

Utlizing analytics like Diver Platform allows organizations to distribute budgets based on monthly, weekly, or daily weightings. A very common method to apply seasonal logic into budget allocation is to calculate the rolling average weighting of the last 3 years. In this way, the budget allocation will be updated automatically based on the seasonal trends of the last 3 years.

In the 2 the charts below, the total budget is the same, but in chart 1 the budget is evenly divided across all 12 months and in chart 2 the budget is divided over the 12 months based on historic seasonal patterns.

Lieven Schellevis

Partner Manager,
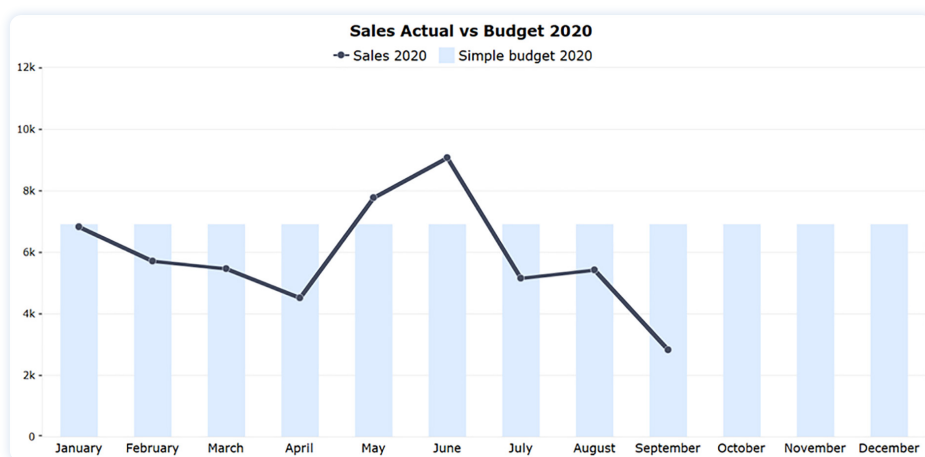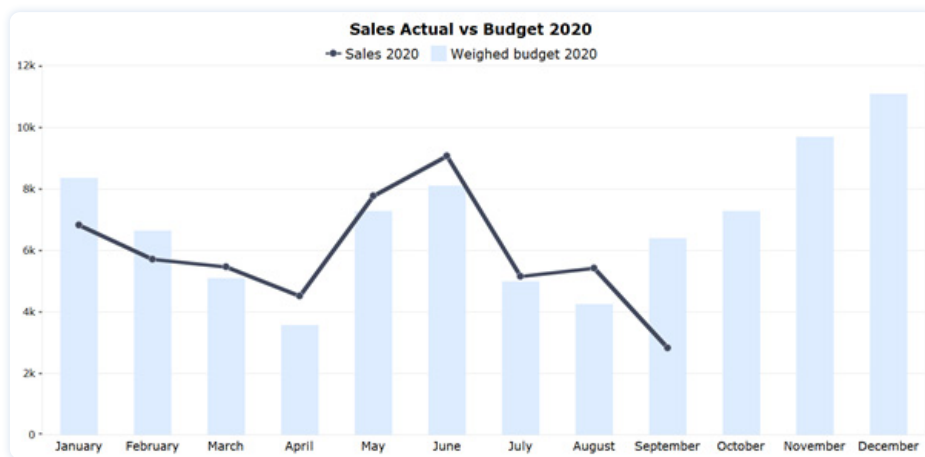Senior BI Consultant

LinkedIn

Chart 1

Chart 2

We hope you found this article useful as we enter into the fall season. Dimensional Insight's family of specific analytical applications and tools can help you to rule the power of your data through innovative data governance, automated data management, and intuitive self-service analytics. Please feel free to reach out to our experts via LinkedIn.

Priscilla Ballaro

Director, Market Outreach

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Using Analytics to Get a Pulse on the Health of Your Emergency Department

by **Kathy Sucich,**
Vice President of Marketing

When everything is running as it's supposed to, a hospital is like a well-oiled machine. Each department plays a role in keeping the hospital working. But when one of the links in the chain isn't at its best, it can negatively impact the entire organization.

The emergency department is critical to the overall flow and financial health of the hospital. And now, during the COVID-19 pandemic, it's even more critical that a hospital's emergency department is running at peak efficiency. This helps both hospital finances by getting patients in the door and patient care, as patients don't have to wait for long periods of time and can quickly and safely get to where they need to be without the potential for exposure.

However, the emergency department faces unique challenges. As Nora Lissy, RN, BSN, MBA, Dimensional Insight's Director of Healthcare

> "Analytics provides the data to streamline processes, improve patient outcomes, and identify areas of transformation in the emergency department."
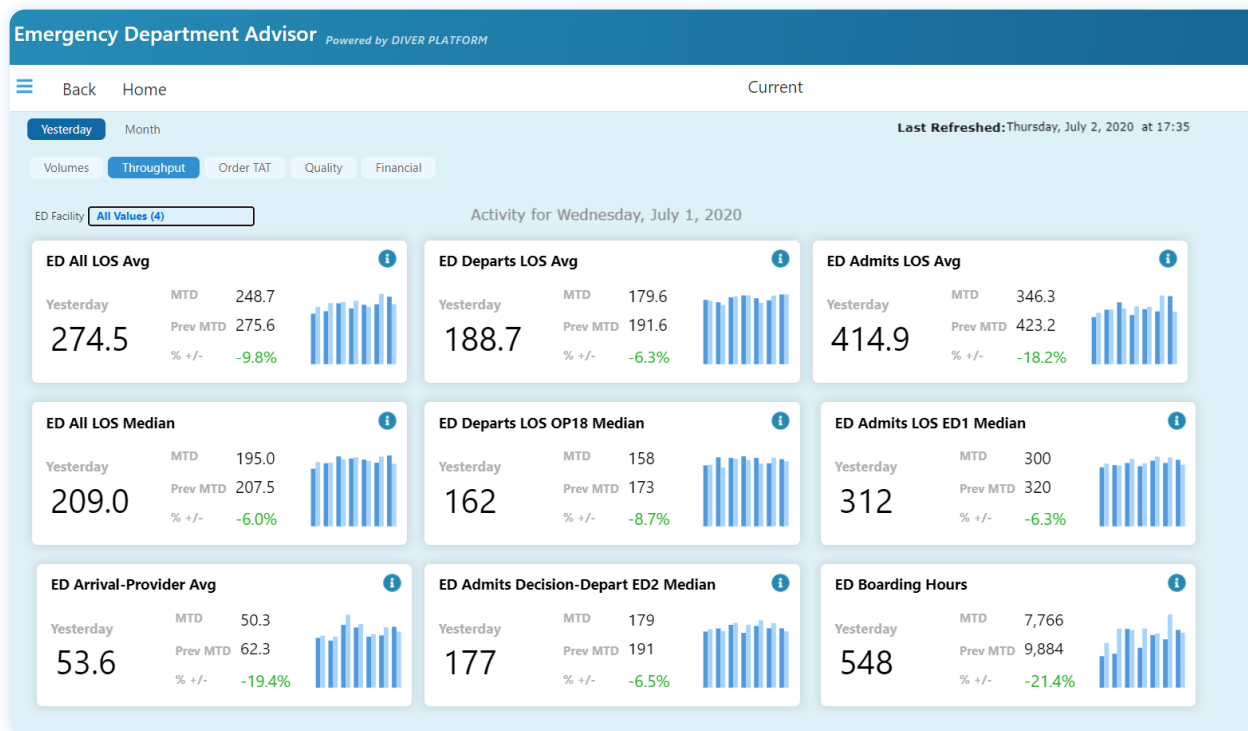
Implementations, says, "A poorly run emergency department can result in poor customer service, low employee morale, and the increased potential for poor clinical outcomes."

What are some of these challenges faced by emergency departments? And how can analytics help address them? Let's examine the biggest issues EDs face:

Capacity: According to the American College of Emergency Physicians (ACEP), emergency departments in the U.S. serve about 76 million patients a year. If there are more patients in the ED than can be treated, everyone suffers. Patients aren't getting the care they need, and the department can't reach its maximum potential.

Throughput: The ACEP also estimates that about 70% of patients admitted to a hospital enter through the ED. Moving these patients requires communication both in the department among admitting staff and physicians, as well as communication between the department and the hospital at large. Bottlenecks can have a rippling effect throughout the system, leading to substandard care, unhappy patients, and higher costs.

Emergency Department Advisor *Powered by DIVER PLATFORM*

Back   Home   Current

Yesterday   Month   Last Refreshed: Thursday, July 2, 2020 at 17:35

Volumes   Throughput   Order TAT   Quality   Financial

ED Facility All Values (4)   Activity for Wednesday, July 1, 2020

ED All LOS Avg		
Yesterday	MTD	248.7
274.5	Prev MTD	275.6
	% +/-	-9.8%

ED Departs LOS Avg		
Yesterday	MTD	179.6
188.7	Prev MTD	191.6
	% +/-	-6.3%

ED Admits LOS Avg		
Yesterday	MTD	346.3
414.9	Prev MTD	423.2
	% +/-	-18.2%

ED All LOS Median		
Yesterday	MTD	195.0
209.0	Prev MTD	207.5
	% +/-	-6.0%

ED Departs LOS OP18 Median		
Yesterday	MTD	158
162	Prev MTD	173
	% +/-	-8.7%

ED Admits LOS ED1 Median		
Yesterday	MTD	300
312	Prev MTD	320
	% +/-	-6.3%

ED Arrival-Provider Avg		
Yesterday	MTD	50.3
53.6	Prev MTD	62.3
	% +/-	-19.4%

ED Admits Decision-Depart ED2 Median		
Yesterday	MTD	179
177	Prev MTD	191
	% +/-	-6.5%

ED Boarding Hours		
Yesterday	MTD	7,766
548	Prev MTD	9,884
	% +/-	-21.4%

Finances: When operations are running smoothly, an emergency department should serve as a positive financial resource for a hospital. However, when it's poorly run, the ED can find itself losing money. The complexities include lost revenue if a patient ends up leaving the hospital before being seen due to a long wait time.

Staffing: Like any business, hospitals can only succeed when they are putting staff members in the best position to treat patients. This includes making sure employees are not overworked, and that shifts are balanced in a way that keeps the emergency department from being over- or under-staffed at different times during the day.

Ancillary services: Ancillary services in the emergency department include everything from lab services to radiology services to diagnostic studies. When turnaround times for these services are delayed, that can affect everything from throughput to the ED census.

While these challenges are certainly daunting, they can be addressed through the improved insight that comes from deploying an analytics solution. Analytics helps hospitals and health systems to get a pulse on the health of their emergency departments and take swift action to make improvements. As Nora Lissy says, "Analytics provides the data to streamline processes, improve patient outcomes, and identify areas of transformation in the emergency department."
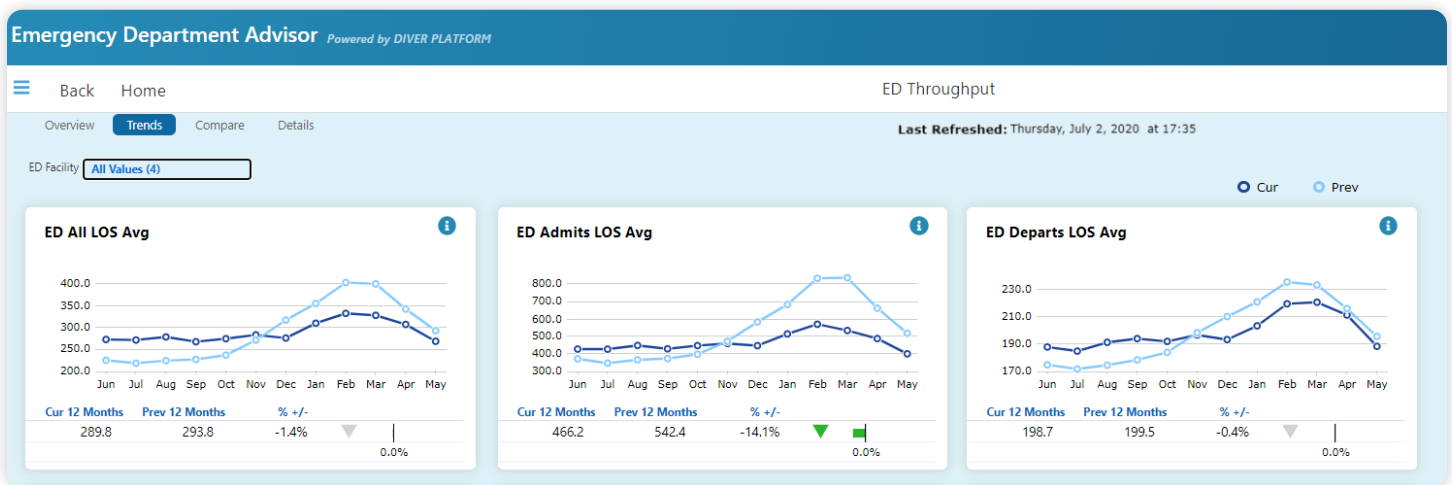
Gaining insight into the health of the ED with Dimensional Insight

At Dimensional Insight, we have developed our Emergency Department Advisor application with the needs of ED users in mind. Our healthcare industry expertise combined with our customer-focused, outcomes-driven methodology has led us to create an application that, quite simply, gets the results you need.

Emergency Department Advisor helps hospitals by:

- Identifying potential bottlenecks and uncovering opportunities for improved ED throughput.

- Flagging patients who return to the ED and supplying detailed information from all ED visits. This allows for analysis of frequent flyers, gaps in care, and better care management.

- Providing a comprehensive compilation of ED metrics around efficiency, throughput, effectiveness, and outcomes, all in one single application.

The metrics used for Emergency Department Advisor, while ED-specific, can also be shared across Dimensional Insight's suite of applications throughout the hospital. This is the benefit of deploying applications from Dimensional Insight's enterprise analytics platform. While departmental applications from other vendors require you to start from scratch with each new project deployment, with Dimensional Insight, the logic and metrics are available for shared use as all applications are part of a single "family" of products. This results

in data integrity, ultimately leading to trust in data across the system, as well as far less time to results and fewer dollars spent in the process.

Learn more about Emergency Department Advisor and what makes Dimensional Insight unique in our approach to analytics.

Visit:

ED Advisor

What's New on the Website—New Section Just for You

To keep our users informed we created a new section of the website called, "What's New on the Website." This section is intended to give you a showcase of what's new and popular throughout all of Dimensional Insight's offerings such as webinars, videos, events, and more.

Please bookmark this page and visit often.

What's New on the Website

Here are a few highlights for this month for you to explore:

Dimensional Insight Virtual Conference 2020

Flying in Formation

DIVC 2020 Sessions Recordings

DIVC 20 RECORDINGS

This link will bring you directly to all the content presented at our recent conference, which was held on September 15th and 16th. In case you missed the conference, please review the content, which provides helpful information across all markets. Featured speakers included: Fred Powers, Stan Zanarotti, Howard Dresner, James Clark, Nancy Berkowitz, and more.

Q&A Knowledge Forum

KNOWLEDGE FORUM

The Knowledge Forum was launched in August as a weekly, 20-30-minute webinar that answers questions from our users across all industries. Our professional training department is managing the quality of the content presented to ensure that attendees are deriving value from the sessions. The webinars occur every Thursday at 2:00 p.m. ET. The Knowledge Forum was originally slated for six episodes. Due to popular demand, we have decided to make this a weekly event. We encourage you to share this event with other users in your organization who may not be on our mailing list.

LATEST TRAINING OFFERINGS

Starting in April, we ran a series of free training webinars for our users. If you missed this training, you can watch it on demand. The training is a way for you to advance your skills and expose you to new ways that you and your organization can use Diver Platform.

Webinars

Video Library		
ProDiver	DivePort	Measure Factory
Workbench	NetDiver	Webinars
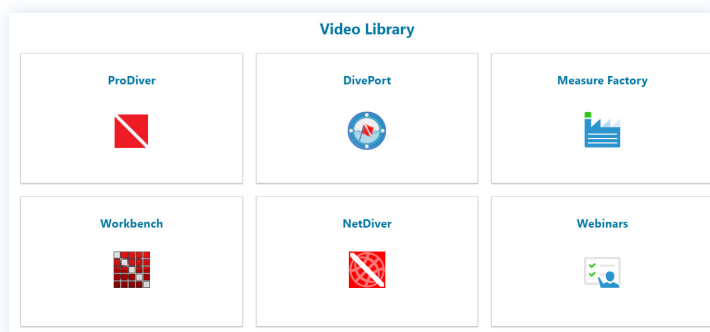
Plus, did you know that there is an entire section of the website that houses training videos on all of our products? These videos are extremely useful to extend your knowledge and keep your skills current. The videos are designed for busy users who can watch by a topic with just a small time investment.

Training

New Partnership:
The Institute for Health Metrics

DIMENSIONAL INSIGHT HAS A NEW PARTNERSHIP WITH THE INSTITUTE FOR HEALTH METRICS (IHM) THAT WILL HELP PROVIDE BENCHMARKING DATA TO CUSTOMERS.

IHM is a non-profit that curates clinical data from community hospitals.

This data extends beyond claims data and includes thousands of data elements per patient, such as lab results, drugs provided and when they were given, and patient locations throughout their hospital stay.

The detail provides a picture of the patient's journey, physician narrative, and is ideal for comparative benchmarking.

Through this partnership, Dimensional Insight customers will be able to access and participate in the benchmarking data.

The data will also help Dimensional Insight drive new product development in the healthcare industry.

We look forward to collaborating with IHM!

About Dimensional Insight

Our vision is to enable data literacy across enterprises, so that everyone in an organization—not just the technologists—develop a fluency with data and can easily understand it and explore it in order to make better business decisions.

We also aim to ensure that data is trusted and is viewed consistently across departments so that everyone is looking at the same data in the same way. Only by ensuring the veracity of data can organizations be sure that they are making sound business decisions.

Learn more...

About Institute for Health Metrics

The Institute for Health Metrics (IHM) has solved one of the most difficult challenges in medical informatics: creating consistent, detailed, normalized data about medical outcomes in hospitals.

Our team extracts clinical data directly from hospitals and delivers it back to those hospitals in a standardized, usable format to an effort to to support process improvement at community hospitals across the country.

Learn more...

News Brief

How the Pandemic Has Impacted Businesses

(And How to Use Data to Adapt)

by **Parker Jones,**
Public Relations Specialist

The COVID-19 pandemic has had a tremendous impact on nearly every business sector, the ripples of which will continue to be felt for years after a vaccine is released. Most of these changes have been challenging for businesses, with thousands of companies being forced to close their doors permanently or make drastic changes to keep customers safe.

While the effects are universal, some industries have been hit much harder than others. Many have even been given an unexpected windfall from the changes. In this article, we will examine some of the varied effects of the pandemic and what changes companies can make to stay ahead of them.

The Way We're Consuming Food and Drinks is Changing

It is no surprise that bars and restaurants took one of the biggest and most immediate hits from the moment the pandemic was declared. In the early days of the catastrophe, most of these locations were forbidden to serve patrons at all, and even now those who are fortunate enough to remain open are still dealing with greatly reduced capacity.

What have thrived are grocery and liquor stores. These "essential services" were able to stay open during the pandemic, and while they have had to make changes (such as limiting capacity, making aisles one-way, and sanitizing carts), business has increased. And delivery services for food and alcohol have fared best of all. Customers are increasingly utilizing services like Instacart and Drizly to have groceries and alcoholic beverages brought directly to them, which is beginning to have a major impact on the way that those business are run.

How can your business adapt to these changes? For those in the beverage alcohol industry, executives can examine their data to see where they can make adjustments to shift from on-premise to off-premise sales. It's also worth exploring partnerships with companies such as Drizly. Other industries that sell to restaurants can investigate how they might be able to pivot their sales operations to shift to those businesses that have not suffered (and are even thriving) due to the pandemic.

The Way We Shop is Changing

People aren't risking unnecessary trips to stores, especially if they no longer have immediate use for what those stores are selling. Clothing stores have seen a sharp decline in business, since people who are working from home and not going out much have little justification for buying new outfits.

However, the story is very different for online retailers. Amazon has likely profited more from the pandemic than any other company. With people avoiding brick-and-mortar stores, they have naturally turned to online vendors who can deliver products right to their doorsteps. This is good for online giants, but bad for local stores. Customers are increasingly trying to avoid shopping from Amazon when possible in an effort to keep local businesses running. Still, it does not look like the company's growth will be slowing down any time soon.

Brick-and-mortar stores that do not offer delivery or online orders may want to examine the option. Collect some data on delivery companies and see if partnerships might be worth exploring. In the age of COVID and convenience, delivery seems to be the way of the future. If delivery isn't possible, online ordering for rapid in-store pickup can encourage customers to buy directly through you, rather than through an online retailer.

The Way We Handle Health and Wellness is Changing

Gyms are particularly hard to run safely in the era of COVID. Many were unable to reopen after the initial shutdowns were lifted, and even those that were able to tough it out suffered heavy losses. Stock for Planet Fitness, one of the largest gym chains in the country, fell from around $70 per share down to around $30. But like others that have been hammered by the pandemic, the fitness industry is finding ways to adapt. Gyms are offering more and more online fitness courses that can be done at home, which, for plenty of people, is reason enough to keep their memberships going.

But it's not just physical fitness that has fallen by the wayside. The Centers for Medicare and Medicaid Services (CMS) recommended in March that elective surgeries and medical procedures, a major source of income for hospitals, should be delayed while the pandemic is ongoing in order to reduce the risk of infection to medical professionals and conserve PPE gear. Dentistry has been one of the most affected fields, although patients are finally starting to return. Although new safety requirements make it tougher for medical facilities to operate profitably, examining their data may offer new ways to maximize efficiency and revenue. With all of the changes being quickly implemented, there are bound to be hidden opportunities to streamline operations.

Meanwhile, businesses in the healthcare field that are directly related to COVID-19 are unsurprisingly surging. Demand for face masks exploded overnight, leaving manufacturers struggling to catch up. Now most American citizens own at least one mask, and will almost certainly need replacements by the time a vaccine is rolled out.

Sanitizer has been another high-ticket item since the outset of the pandemic. Massive quantities need to be produced every day for doctors and hospitals that need to sterilize medical equipment, for commercial businesses that have to sanitize their bathrooms, shopping carts, and other amenities, and for personal use by individual consumers. Companies that are able to offer masks, sanitizer, or other COVID related goods and services should strongly consider doing so.

The Way We Consume Entertainment is Changing

For many Americans, the moment they learned the NBA season would be suspended was the moment when they suddenly understood how serious this disease was going to be. Formerly packed stands of sports arenas around the country now sit empty, even as games take place. Concert season was also put on hold, with tours and music festivals being cancelled. Theaters, from cinemas to Broadway, shut down.

What do all of these have in common? An abrupt halt to ticket sales. This has hurt the business of all kinds of venues, which are notoriously expensive to maintain. Many will have difficulty reopening, but that hasn't stopped some, such as AMC Theaters, from opening with limited capacity. Owners of venues may want to explore ways of safely reopening, even if it means leaving every other seat vacant.

But just because they're trapped at home doesn't mean people don't still crave entertainment. Now, however, most of that entertainment is coming from televisions. Although the production of new shows and movies has been slowed, subscriptions for streaming services like Prime Video and Hulu have skyrocketed. Netflix, who maintains its lead over competitors, added 16 million new subscribers in the first quarter of this year. Video game sales are also on the rise, with titles like *Doom Eternal* and *Animal Crossing: Wild World* seeing a visible boost in sales from the pandemic.

Since they are no longer able to present shows in live settings, entertainment companies should focus on reaching audiences at home. Disney has provided two great examples of this. First, they recorded their stage production of *Hamilton* so that viewers could see it without going to the theater. Other companies can follow this example by selling recorded versions of live shows for people to watch at home. Second, Disney released *Mulan* on their streaming service, rather than in theaters, for an additional charge. Likewise, other movie companies can consider offering their films as premium viewing experiences, not unlike pay-per-view. This keeps excitement around the new releases high while earning a large portion of the money that would have been made from ticket sales.

Travel and Tourism are Changing

Most facets of the tourism industry have been severely hampered by COVID-19. International flights from the U.S. have been almost completely shut down, and even domestically people still seem nervous to fly. It is still unclear what the holiday travel season will look like for America's airports. Delta has attempted to assuage these fears by extending its pledge to leave middle seats empty to help with social distancing until January of next year. So far this has proven to be a successful business tactic for them, which other airlines and travel companies should emulate.

Hotels have been hit hard, with 42.3% of associated jobs having been lost. With people conducting business virtually and most vacations cancelled, hotels are left mostly vacant. Pre-pandemic levels of occupancy are unlikely to return for several more years.

Data shows that economy hotels are doing better than luxury ones, and most travel taking place now is for business rather than leisure. Hotel owners should consider scaling down their operations, reducing the number of expensive luxury amenities available, and perhaps the number of rooms as well. Data can help show them which services are bringing in revenue right now and which services should be scrapped.

Conclusion

While most of the changes brought on by COVID-19 have been negative, there seems to be a windfall for every downfall. In order to thrive in this new environment, organizations need to shift their way of thinking. The businesses most able to adapt to the pandemic are the ones most likely to survive it, which is why it is important to pay close attention to the data you have on hand to see which way the wind is blowing and respond accordingly. Above all, taking visible steps to ensure customers' safety seems to be the best way to earn their confidence and, in turn, their business. □

"R" You Ready for Predictive Analytics?

If you've been wondering when R will be usable in Diver, there's good news for you. The short answer is: now. Let's take a quick look at how you can integrate R into your workflow to gain predictive functionality.

Using R requires you to execute nodes in our back-end tools, Visual Integrator and DI-Production. These tools allow you to run R scripts anywhere you need to across the data flow. Normally this is after the Data Management step. This is the initial step in the flow, where the raw data is ingested and where some data cleaning and prep work is done; maybe a bit of business logic is added as well. Once you've done that, your cleaned and relevant data is ready for further processing in an R module.

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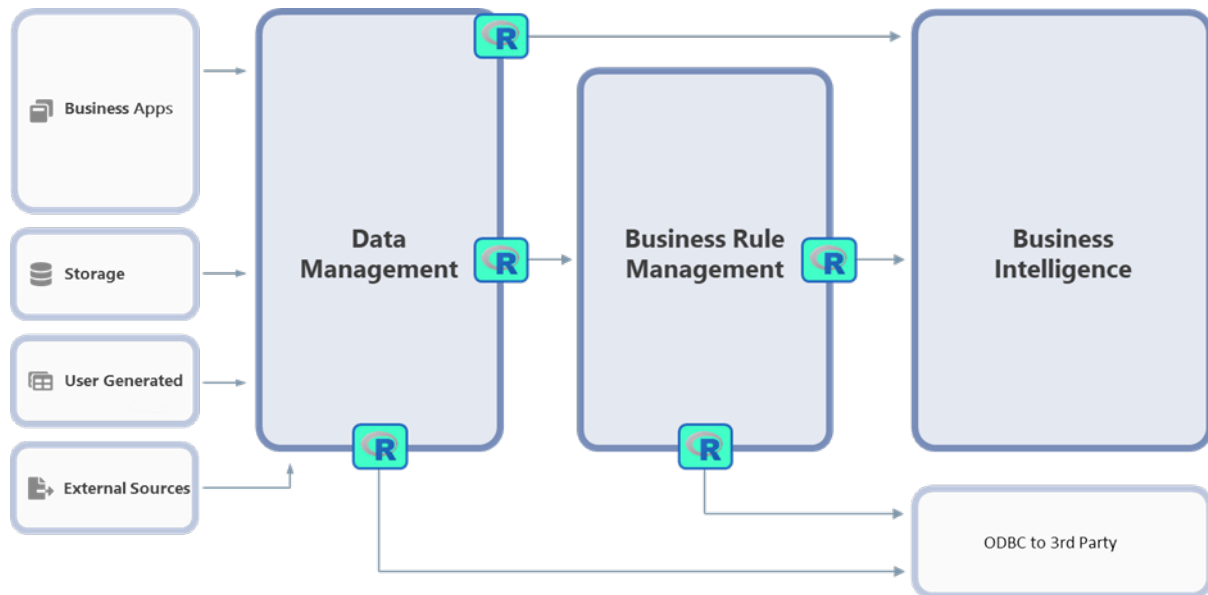
You can also run R modules later in your data flow: for example, after the Business Rule Management stage or even on the output of a Measure Factory. The data outputs from any of these R modules can be analyzed further in the final Business Intelligence step, either within Diver or via ODBC coupling to third-party applications.

Introducing R into your Diver data flow is relatively straight forward and utilizes existing standard DI-Production functionality. Data is prepared, using Visual Integrator, just like any normal Diver ETL flow. In addition, a set of command line parameters needs to be prepared. Both the prepared data and the parameters are then used in a DI-Production Execute node to run an R script. This script in turn saves its output data to a specified file. And finally, this file is used in further Visual Integrator ETL work, or processed directly into a cBase for presentation in DivePort, or made available to third-party tools.
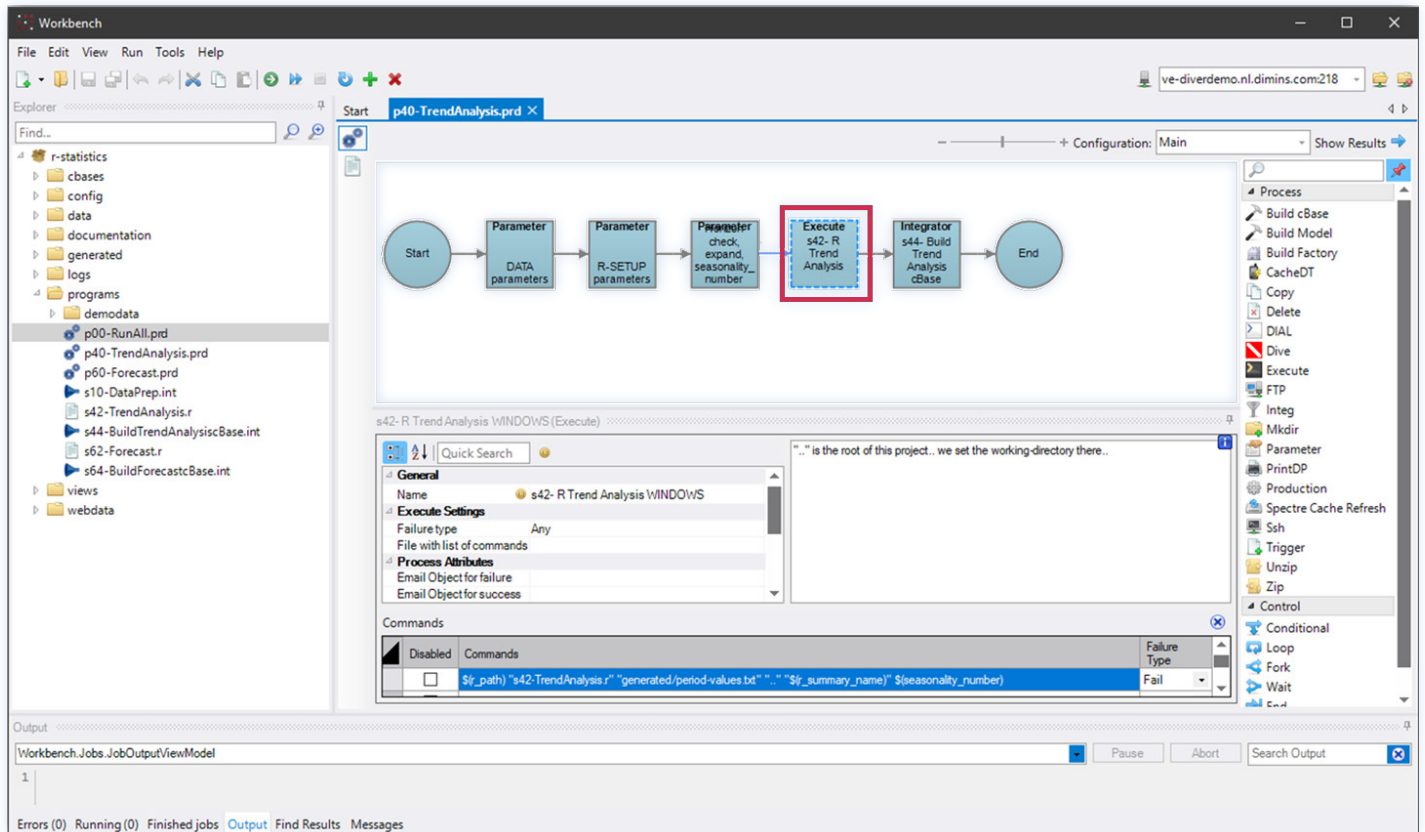
Some typical use cases for including R into your Diver data flow would be for forecasting and trend-analysis in situations where simple linear regression just isn't powerful enough; for finding patterns and predicting group membership through clustering algorithms; and for data cleansing and fraud detection using outlier detection routines. Fortunately, Diver's flexibility makes it easy to combine its magic with the magic of R to create something special.

Feel free to reach out to learn more. Hopefully this short note stimulates you to start using your own R scripts to generate sophisticated statistical analyses within your own Diver environment. □

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