
DATA SCIENCE FOR FOOD & BEVERAGE

Is It Right For Your
Business?



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INTRODUCTION:

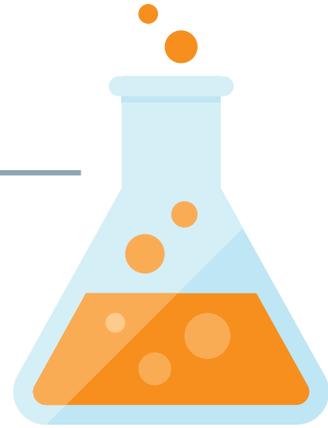
At the dizzying pace of today's digital marketplace, food & beverage operators know invaluable data streams into their enterprise every second – carried by tributaries of information, from POS transactions to mobile apps to e-commerce.

But it's one thing to know that such data could lead to sales-generating insights and cost-saving secrets, and it's another thing altogether to actually **apply** the information to bolster the bottom line.

That's where Oracle Hospitality Data Science, our new data-analytics cloud service, comes into play. Its mission is clear: Convert data into profit.

Data Science bundles Oracle's technology resources and expert know-how to execute the much-desired conversion. In three key steps – identifying significant factors that affect business, predicting their impact on sales and operating efficiency, and offering prescriptive recommendations – Data Science accelerates "speed to value" and delivers results, whether it's improving up-sells or generating savings by optimizing staffing.

In this concise brief, we'll explore some of the barriers that prevent operators from capitalizing on data (and how to overcome them) and demonstrate the genuine dollar value of information with real-life scenarios. Plus, we'll provide a checklist to determine if a commitment to Data Science makes sense for your enterprise. We're confident that it will.



Why F&B Operators Need Data Science

With competition intensifying nearly everywhere and margins getting squeezed, we'd like to pose a few hypothetical scenarios. For example, how valuable would it be to know in advance that tomorrow's local football game will spike sales by 10%? Or that your hamburger promotion will boost sales by 3%, but cause hot dog sales to dip 1%?

Such performance insights offer a glimpse of the powerful information that lies dormant within POS data. But just imagine being able to extract it and analyse it to define business action – in other words, adjust inventory and staffing to maximize sales and reduce waste. Indeed, using data to take proactive measures can be the difference between success and failure.

Tap a cross-disciplinary team dedicated to uncovering the best strategy

In many cases, however, operators don't even attempt to dive into their data goldmine because the task seems too daunting or they lack the necessary resources. The reality is, data analytics does require processing power and the interpretive skills of experts. Which explains, arguably, the biggest benefit of Oracle's Data Science service: Customers gain access to Oracle's renowned machine learning and data-analytics expertise – without having to spend exorbitantly for data infrastructure or the hiring of their own analysts. In addition to Oracle technology, Data Science delivers the support of a team of leading data scientists, database engineers and experienced hospitality consultants.

Two cloud-driven offerings – Data Science for Menu Recommendations and Data Science for Adaptive Forecasts – are available to customers worldwide, improving up-sell and cross-sell opportunities, and optimizing operations, respectively.



Maximize sales with Data Science for Menu Recommendations

Data Science for Menu Recommendations enables operators with multiple locations to evaluate their menus and identify enhancements to maximize every sales opportunity. Data Science can seek the best possible up-sell or cross-sell options by location or time of day. Assumptions around cross-sells and up-sells can be analyzed, leading to better understanding of guest behavior and preferences.

Thanks to Data Science's integration with the Oracle Hospitality technology platform, recommendations to the question – “What should I do?” – are dynamically fed to POS terminals and displayed clearly as cross-sells or timed up-sells. Staff simply executes the option to boost sales and serve guests without delay.

But how much of an impact can menu recommendations really make?

Let's do the math to quantify the sales gain for a QSR:

Example #1:



Every day, Bronwen's Burgers takes 300,000 orders across their estate. If a customer orders a burger or a burger and fries, staff are trained to up-sell to a meal. Typically, 10% of customers accept the up-sell. Let's assume that an up-sell is worth an extra \$2, and one-third of the customers are offered the up-sell.

Before Data Science:

- Total orders daily: 300,000
- % offered meal deal up-sell: 33% or 100,000
- % accepting up-sell: 10% or 10,000
- Additional value of each up-sell: \$2.00
- Revenue generated daily: \$20,000 (10,000 x \$2.00)

But with the application of Data Science, operators can identify in advance the best possible up-sell or cross-sell for a particular order by studying consumer behavior – using parameters such as location, time of day or national trends. In this case, such analysis leads to increasing up-sell acceptance to 15%, which results in significant revenue gain:

After Data Science:

- Total orders daily: 300,000
- % offered meal deal up-sell: 33% or 100,000
- % accepting up-sell: 15% or 15,000
- Additional value of each up-sell: \$2.00
- Revenue generated daily: \$30,000 (15,000 x \$2.00)

+ \$3.6 million annually

With the application of Data Science, sales at Bronwen's Burgers increase \$10,000 per day – or more than \$3.6 million annually.

Example #2:



The Primo Pizza chain typically offers cross-sells to 80% of its guests. Only 10% accept the cross-sell, valued at \$15.00 each on average, giving the chain \$12,000 in extra revenue. Increasing the cross-sell acceptance rate to 20%, thanks to the power of analysis, bolsters sales:

Before Data Science:

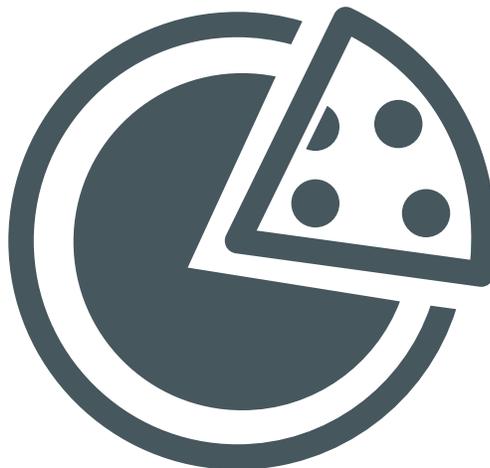
- Total covers daily: 10,000
- % offered cross-sell: 80% or 8,000
- % accepting cross-sell: 10% or 800
- Additional value of each cross-sell: \$15.00
- Revenue generated daily: \$12,000 (800 x \$15.00)

After Data Science:

- Total covers daily: 10,000
- % offered cross-sell: 80% or 8,000
- % accepting cross-sell: 20% or 1,600
- Additional value of each cross-sell: \$15.00
- Revenue generated daily: \$24,000 (1,600 x \$15.00)

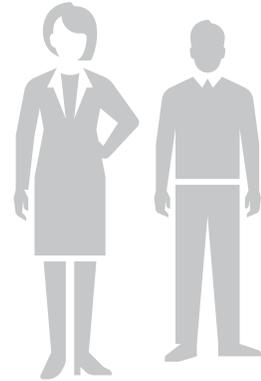
+ \$4 million annually

With the application of Data Science, sales increase by \$12,000 per day – or more than \$4m annually.



Optimize stock and labor with Data Science for Adaptive Forecasts

To better predict stock and labor needs at every location, operators can take advantage of Data Science for Adaptive Forecasts. The service creates a single forecast by item, location and day part, and factors in weather, events, time of day, day of the week and Net Promoter scores. Such forecasting maintains appropriate levels of inventory and staffing in all business scenarios, helping store managers minimize wasted inventory, lower labor costs and, most importantly, ensure an exceptional guest experience.



Let's measure the real value of adaptive forecasts, again, by doing the math:

Example #3:

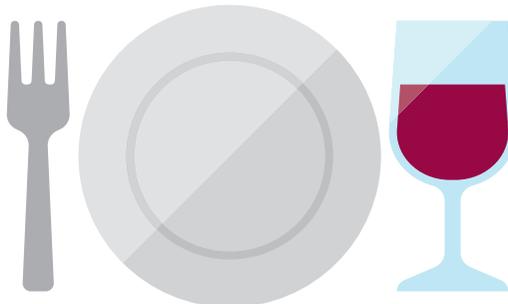
Company B generates \$600 million in annual revenue with 60% tied to labor and inventory costs. In a constant quest to improve margins, operators can turn to adaptive forecasts to make business predictions – using factors such as weather, traffic and customer demographics. By knowing how such variables will affect business, operators can anticipate and adjust inventory and staffing. In this case, optimization results in a 10% reduction in labor and food costs. The impact on the bottom line is shown here:

Before Data Science:

- Annual revenue: \$600 million
- Labor & inventory costs: \$360 million (or 60% of sales)

After Data Science:

- Annual revenue: \$600 million
- Labor & inventory costs: \$360 million (or 60% of sales)
- % savings generated by optimization: 10% or \$36 million
- Cost reduction per day: \$100,000





Is Data Science right for your business?

Operating in a new world order where the most valuable currency is information, every food and beverage operator needs to ask the question: Are we using data – or wasting it?

The best way to obtain an honest answer is to evaluate the digital readiness of your business. Review the following checklist to determine if your business stands to benefit from Data Science:

QUESTION	ANSWER
Are you interested in increasing sales over the next 12 months and beyond?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Would you like to see what your data can tell you about how your menu could be improved to increase sales?	<input type="checkbox"/> YES <input type="checkbox"/> NO
If you're using cross- and up-sells in your locations, would you be interested in seeing if they're effective and how they could be improved?	<input type="checkbox"/> YES <input type="checkbox"/> NO
If you're not using cross- and up-sells, would you be interested in understanding how you could introduce them and what the optimum combinations would be?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Are you interested in improving the offers that staff can make to your guests during the order process?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Would you like to reduce the cost of waste across your business?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Would you like to reduce the cost of overstaffing in your business?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Are you interested in seeing forecasts for your locations that set out an expectation for labor and inventory needs?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Do you have 300 POS Clients or more?	<input type="checkbox"/> YES <input type="checkbox"/> NO

If you have answered **Yes** to three or more of the above, it's time to take a deeper look at how Data Science can help you. [Contact your Oracle representative today or contact us at \[OracleHosp_ww@oracle.com\]\(mailto:OracleHosp_ww@oracle.com\)](#).



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Oracle Hospitality Data Science
please contact us or visit:



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