# Engineering profitable menus

**Using POS Data To Streamline Your Offer & Maximise Profit**

In partnership with

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With rising costs across all areas of your business, there's a high chance that you're feeling the pinch right now. With polls suggesting that during the first half of 2022 more than a third of people have been forced to reduce or stop spending on eating out*, you may be concerned about your ability to thrive in this increasingly challenging landscape.

You will need to consider flexing your menus and sources of revenue to maximise profitability and keep bringing customers back through your doors.

The good news is that this is entirely achievable. **With a little resourcefulness and the backing of your sales or POS data, it is possible to engineer menus to meet these challenges.** To help get you started, we've teamed up with the experts at Yumpingo to provide practical advice and best practice guidance on menu engineering.

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# Where to start:
# Pull the sales data from your POS system

A **Star/Dog analysis** might sounds like an odd concept, but it's a very useful tool to help determine what dishes drive the most profitability for your business. Here we take you through how to conduct a Star/Dog analysis on your menu.

Firstly, to get a really clear view of your business and menu we recommend that you do this course by course. This will give you a clear view on how dishes perform within each course specifically, but will also allow you to see how order frequency differs by course too.

**tip:** Analyse your sides and consider the results alongside your main courses, to see where you could be upselling more.

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# So, where do you start?

We've created an easy-to-use Excel template which you can download **here**. Once you have your copy, follow these instructions to complete your analysis:

**1** On the first tab of the template, called '**Basic**', add the names of your dishes, plus the cost price and the selling price, in the relevant fields. The remaining fields in each row will automatically populate.

**2** On the second tab of the template, called '**Sales Volumes**', input the number of units sold per dish over a given time period into column J ('Sales'). We would suggest a period of 3 months, to give you a good range.

| Course | Dish Name | Cost | Selling Price | Selling Price ex Vat | Margin | Cost of Sale | Gross Profit |
|--------|-----------|------|---------------|----------------------|--------|--------------|--------------|
| | Dish 1 | £ 1.30 | £ 6.00 | £ 4.80 | £ 3.50 | 27% | 73% |
| | Dish 2 | £ 1.10 | £ 6.00 | £ 4.80 | £ 3.70 | 23% | 77% |
| | Dish 3 | £ 1.80 | £ 6.00 | £ 4.80 | £ 3.00 | 38% | 63% |
| | Dish 4 | £ 1.73 | £ 6.00 | £ 4.80 | £ 3.07 | 36% | 64% |
| | Dish 5 | £ 1.00 | £ 6.00 | £ 4.80 | £ 3.80 | 21% | 79% |
| | Dish 6 | £ 1.24 | £ 6.50 | £ 5.20 | £ 3.96 | 24% | 76% |
| | Dish 7 | £ 1.38 | £ 6.50 | £ 5.20 | £ 3.82 | 27% | 73% |
| | Dish 8 | £ 1.00 | £ 6.50 | £ 5.20 | £ 4.20 | 19% | 81% |
| | Dish 9 | £ 1.78 | £ 6.50 | £ 5.20 | £ 3.42 | 34% | 66% |
| | Dish 10 | £ 1.70 | £ 6.50 | £ 5.20 | £ 3.50 | 33% | 67% |
| | Dish 11 | £ 1.40 | £ 7.00 | £ 5.60 | £ 4.20 | 25% | 75% |
| | Dish 12 | £ 1.89 | £ 7.00 | £ 5.60 | £ 3.71 | 34% | 66% |
| | Dish 13 | £ 2.20 | £ 7.00 | £ 5.60 | £ 3.40 | 39% | 61% |
| | Dish 14 | £ 2.40 | £ 7.00 | £ 5.60 | £ 3.20 | 43% | 57% |
| | Dish 15 | £ 1.87 | £ 7.00 | £ 5.60 | £ 3.73 | 33% | 67% |
| | Dish 16 | £ 2.50 | £ 7.50 | £ 6.00 | £ 3.50 | 42% | 58% |
| | Dish 17 | £ 1.64 | £ 7.50 | £ 6.00 | £ 4.36 | 27% | 73% |
| | Dish 18 | £ 1.48 | £ 7.50 | £ 6.00 | £ 4.52 | 25% | 75% |
| | Dish 19 | £ 2.70 | £ 7.50 | £ 6.00 | £ 3.30 | 45% | 55% |
| | Dish 20 | £ 1.99 | £ 7.50 | £ 6.00 | £ 4.01 | 33% | 67% |

| Course | Dish Name | Dish Number | Gross Profit | Sales | Average | Higher or lower than average |
|--------|-----------|-------------|--------------|-------|---------|------------------------------|
| | Dish 1 | 1 | 73% | 122 | | 45% |
| | Dish 2 | 2 | 77% | 343 | | 125% |
| | Dish 3 | 3 | 63% | 385 | | 141% |
| | Dish 4 | 4 | 64% | 370 | | 135% |
| | Dish 5 | 5 | 79% | 222 | | 81% |
| | Dish 6 | 6 | 76% | 330 | | 121% |
| | Dish 7 | 7 | 73% | 350 | | 128% |
| | Dish 8 | 8 | 81% | 133 | | 49% |
| | Dish 9 | 9 | 66% | 120 | | 44% |
| | Dish 10 | 10 | 67% | 287 | 274 | 105% |
| | Dish 11 | 11 | 75% | 321 | | 117% |
| | Dish 12 | 12 | 66% | 265 | | 97% |
| | Dish 13 | 13 | 61% | 404 | | 148% |
| | Dish 14 | 14 | 57% | 300 | | 110% |
| | Dish 15 | 15 | 67% | 198 | | 72% |
| | Dish 16 | 16 | 58% | 244 | | 89% |
| | Dish 17 | 17 | 73% | 277 | | 101% |
| | Dish 18 | 18 | 75% | 108 | | 39% |
| | Dish 19 | 19 | 55% | 388 | | 142% |
| | Dish 20 | 20 | 67% | 305 | | 111% |



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**3** Once you've inputted your data, take a look at the third tab of the template, '**StarDog**'. The graph should automatically have updated to show each of your dishes profit % vs. amount sold. The vertical line which appears somewhere close to the middle of the graph represents your average covers.

**4** Agree the gross profit margin that your business needs to work to (e.g. 70%). **Draw this line horizontally across your graph at the relevant point.**

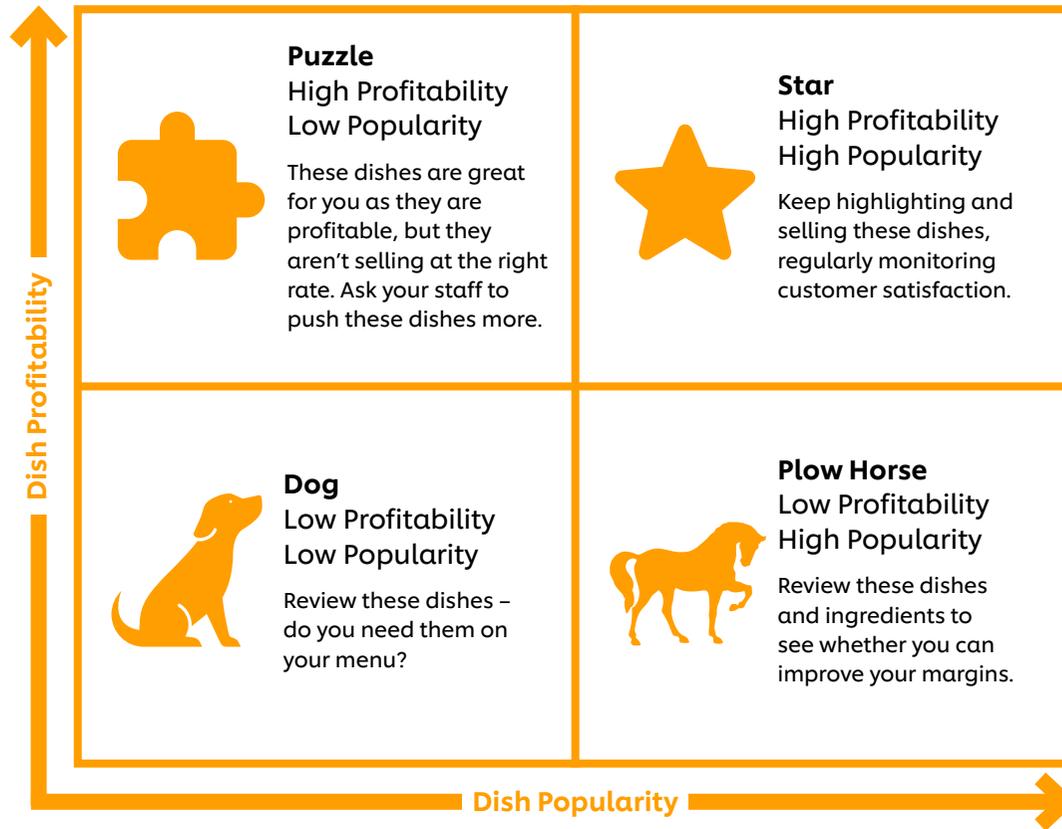The two lines will intercept and you should now have a graph with for quadrants.
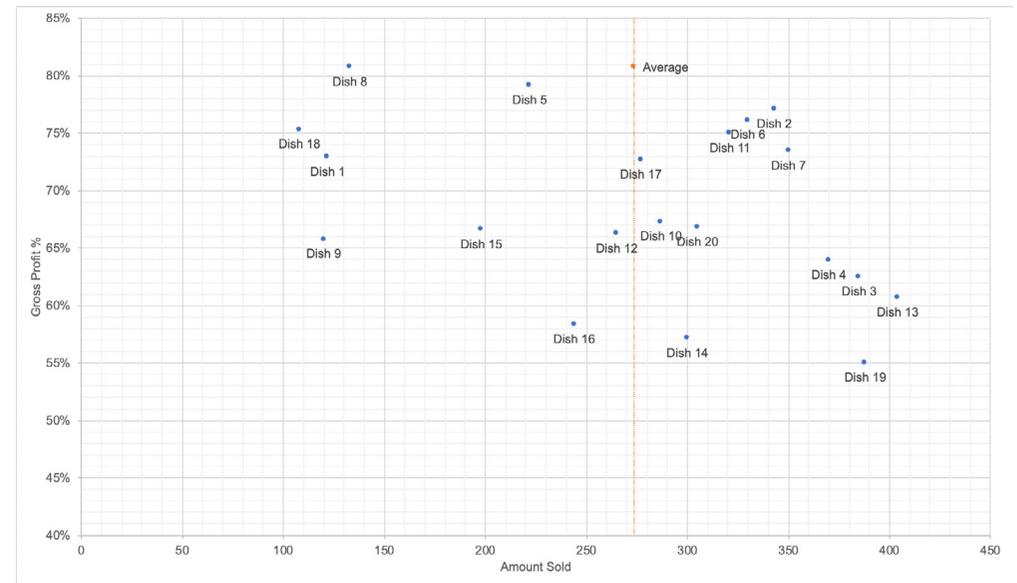


So, what does all of this mean for your menu?

**READ ON TO FIND OUT**

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Here's how the dishes in each of the four quadrants of your Star/Dog analysis can be evaluated:

**Dish Profitability** (vertical axis)

**Dish Popularity** (horizontal axis)

**Puzzle**
High Profitability
Low Popularity

These dishes are great for you as they are profitable, but they aren't selling at the right rate. Ask your staff to push these dishes more.

**Star**
High Profitability
High Popularity

Keep highlighting and selling these dishes, regularly monitoring customer satisfaction.

**Dog**
Low Profitability
Low Popularity

Review these dishes – do you need them on your menu?

**Plow Horse**
Low Profitability
High Popularity

Review these dishes and ingredients to see whether you can improve your margins.

**Considerations:**

- Look at your analysis as a total view. Do you have dishes that are low margin, low popularity and complex to produce? If yes, how can you improve margins and / or reduce complexity?

- Reducing complexity can be anything from getting your butcher to do more, compromising on what is made in house or simplifying your offer in the short term.

- Look at your menu and see where you can cross-reference ingredients usage – or use them as a tool to upsell dishes and increase your selling price. For example, if you offer Nachos with Chilli, why not also offer the Chilli as an additional topping to a burger as a special.

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# Measuring dish complexity

Dish complexity refers to amount of effort and skill required to execute a dish successfully. This can include factors like prep time, number of steps in the recipe, number of stations required to prepare the dish, margin for error, etc.

## How do you measure dish complexity?

To measure complexity, refer to your standardised recipes, consult with your BOH team and look at comp values per dish from your POS data. Using this information, simply rate each dish on a scale from 1 to 5. You will find a guide for this in our free Excel template on tab four ('Dish Complexity').

Plot this against the volume ordered and the margin of each dish, **as shown in the table opposite.**

Weighing dish complexity against the other factors that you've measured in the Star/Dog analysis helps paint a clearer picture of potential pitfalls in your menu, **particularly if you are looking to move into delivery or takeaway.**

| | Sales | Dish Margin (%) | Dish Complexity |
|---|---|---|---|
| Dish 1 | 3697 | 70.2 | 4 |
| Dish 2 | 2659 | 78.4 | 3 |
| Dish 3 | 2068 | 76.6 | 3 |
| Dish 4 | 1741 | 77.7 | 4 |
| Dish 5 | 1702 | 75.3 | 2 |
| Dish 6 | 1682 | 71.5 | 3 |
| Dish 7 | 1637 | 74.4 | 3 |
| Dish 8 | 1595 | 77.9 | 4 |
| Dish 9 | 1524 | 76.9 | 3 |
| Dish 10 | 1495 | 75 | 3 |
| Dish 11 | 1480 | 80.2 | 2 |
| Dish 12 | 1402 | 73.6 | 1 |
| Dish 13 | 1200 | 77.3 | 4 |
| Dish 14 | 1185 | 78 | 3 |
| Dish 15 | 1129 | 70.1 | 5 |
| Dish 16 | 1122 | 69.8 | 4 |

**Potential issue, lower complexity**

**Great dishes, push these more**

**Issue identified, remove or tweak**

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# How adjusting dish complexity can benefit your business

Decreasing dish complexity can help make your operations more efficient, offer your guests a more consistent product, and often decrease your food cost – especially if labour is a challenge for your business.

For example, let's say you usually make your sauces from scratch. If you need to reduce dish complexity, then consider using products to help you. Ordering, weighing and then cooking 12 different herbs and spices, for instance, is more complex than using a product such as Knorr Professional Patak's Sauces. Here, one product can save you time, whilst delivering the consistency you need and retaining authenticity.

**Weigh the pros and cons of each method and determine what level of dish complexity works best for your restaurant.**

Many fine dining restaurants are reducing complexity by offering combined tasting and a la carte menus – giving the customer choice between the 'full experience' or simply choosing any single dish.

**Need to reduce complexity when creating sauces?**

Try Knorr Professional Patak's range of Concentrated Sauces

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# Menu Price Elasticity & Value Perception

It might all sound very complicated – but it doesn't have to be. Let's break it down...

**The price elasticity of a dish means what impact changing the pricing of a dish has on the frequency of that dish being ordered.**

This is largely affected by restaurant type. For instance, quick service (QSR) concepts that have a low average check but high volumes tend to be a lot more elastic than higher end dining concepts. At QSRs, price tends to be one of the deciding factors for customers who choose to eat there, so any adjustment to pricing could have significant implications to volume.

Conversely, the customers of higher end restaurants tend to choose to eat there for reasons other than price. Because of this, small changes to price tend not to affect volume of sales significantly.

Depending on the price elasticity of the dish, a small change to pricing could go a long way towards changing order frequency and value perception.

QSR    Fast Casual    Casual Dining    Upscale    Fine Dining

**High Price Elasticity**

**Low Price Elasticity**

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# What does this mean for your business?

**For low price elasticity dishes or concepts,** try tweaking the menu description or dish presentation/accompaniments as a way to improve value perception without lowering price. Decreasing the price of these dishes risks having a larger effect on your bottom line than the improvement to value perception.
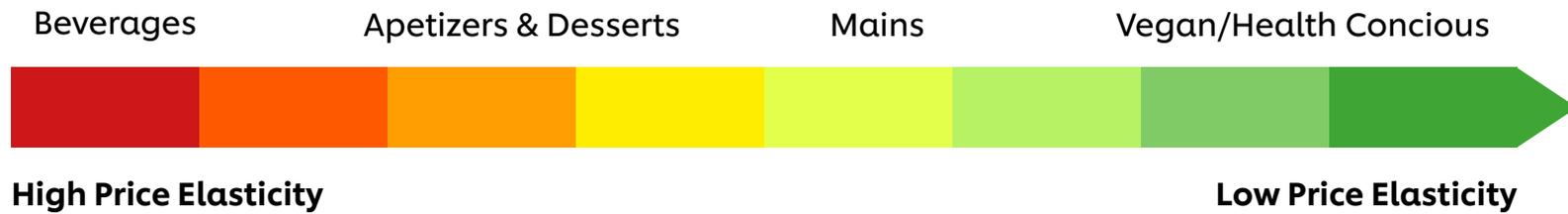
**Breakfast and lunch** tend to be the **most price sensitive meal periods.** A small decrease to the price of these dishes could go a long way towards improving value perception and increasing demand. Conversely, a small increase to price will have a big impact on order frequency, particularly in densely competitive areas (e.g. delivery platform, food courts, etc.)



**For highly elastic dishes or concepts,** try to find the right balance of price and volume by experimenting with menu prices. Start with low risk dishes that are also in an undesirable Star/Dog category and track changes regularly.

Breakfast                    Lunch                    Dinner

**High Price Elasticity**                              **Low Price Elasticity**

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**Beverages and sides** are seen as the **most price sensitive menu categories.** This is because they are seen as add-ons to the meal instead of an essential part of the experience. That being said, demand for salads and kids meals tends to be less affected by price because of the demographic who orders them. These dishes are great for helping you drive profitability.



| Beverages | Apetizers & Desserts | Mains | Vegan/Health Concious |
|---|---|---|---|



**High Price Elasticity**                                **Low Price Elasticity**



With the right products, it's possible to reduce the complexity of dish as well as your cost price whilst at the same time driving popularity.

**FIND OUT MORE ON P12**

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# Working example: Crème Brûlée

Flexing the price by reducing it – something which you may need to have a play around with – could improve popularity by making that dish more appealing to a larger number of customers. This doesn't have to come at the sacrifice of margin either, if you're using a convenience product such as **Carte D'Or Crème Brûlée.**

By using Carte D'Or instead of making a Crème Brûlée from scratch, your cost price will reduce significantly, as shown below:



| Dish Name | Cost | Selling Price | Selling Price ex VAT | Margin | Cost of Sale | Gross Profit |
|-----------|------|---------------|----------------------|--------|--------------|--------------|
| Crème Brûlée from scratch | £1.15 | £6.95 | £5.56 | £4.41 | 21% | 79% |
| Carte D'Or Créme Brûlée | £0.44 | £6.95 | £5.56 | £5.12 | 8% | 92% |

But to increase popularity, you could take this a step further by sacrificing a small amount of revenue in order to drive more sales and turnover in the long run:

| Dish Name | Cost | Selling Price | Selling Price ex VAT | Margin | Cost of Sale | Gross Profit |
|-----------|------|---------------|----------------------|--------|--------------|--------------|
| Crème Brûlée from scratch | £1.15 | £6.95 | £5.56 | £4.41 | 21% | 79% |
| Carte D'Or Créme Brûlée | £0.44 | £6.25 | £5.00 | £4.56 | 9% | 91% |

Cost calculations based on pricing as of 15th June 2020.

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**For more information and support visit**

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Launched in the UK in 2017, Yumpingo is the voice of your guest. Our unique guest insights platform captures and analyses guest sentiment across all touchpoints, giving restaurants portfolio-wide insights on NPS and steps of service across every channel, every shift and every dish. Deployed quickly, slotting easily into every service style, Yumpingo provides unique clarity of what makes your guests happy, helping you and your restaurant teams deliver their best, every day.

We work for some of the world's largest and most innovative hospitality groups including California Pizza Kitchen, YO!, Azzurri Group and John Lewis Partners, enabling their teams to make more decisions, faster, and with greater confidence by turning guest data into actionable insights at unprecedented levels.