

Commercial Benefits Of Sous Vide

A Whitepaper By Grant Creative Cuisine



Creative Cuisine

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Introduction:

Sous vide cooking has had the reputation of being a “fancy-foods” process designed only for large and up market restaurants. This is a rapidly unravelling myth. As experience with the technique grows, together with equipment becoming more affordable, sous vide and the benefits of the technique are now more accessible and affordable than ever.

This whitepaper describes some of the financial benefits of introducing sous vide cooking to a professional kitchen, giving a worked example of a medium sized restaurant based on two slightly different scenarios.

Cost Reducing Advantages:

- Lower recipe ingredient costs
- Less portion shrinkage
- Deliver premium results with lower cost cuts of meat
- Often lower energy consumption
- Enhanced kitchen multi-tasking
- Reduced personnel costs
- Significantly less food wastage
- Time savings by cooking in advance



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Potential Revenue Enhancing Benefits:

- Greater consistency with recipe adherence
- Unique preparations
- Nutritional benefits
- Improved menu planning
- Enhanced bar offerings from sous vide cocktails

The overall cost savings potential for a medium sized independent restaurant is estimated to range from £198 (€247,50) to £503.13 (€654,06) per week; £10,296 (€12,870) to £26,162.76 (€34,011,12) annually. To achieve these figures, an initial investment in sous vide equipment would cost between £2,000 (€2,500) and £4,500 (€5,625), yielding a substantial return on investment and a payback of less than a year.

The financial benefits of sous vide cooking in a professional kitchen - even without considering the potential increases in revenues are substantial. Because of this, sous vide cooking is fast becoming a 'must have' culinary technique for all manner of food service establishments, from Michelin Star restaurants to Cafés, Street Food vendors and even Cocktail bars.



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Potential Revenue Enhancing Benefits:

- **Recipe Results Consistency:** Sous vide cooking involves cooking ingredients at a consistent, often lower temperature for a longer period of time. Because ingredients remain in the sous vide water bath for a considerable amount of time without overcooking, once an ingredient reaches the desired cooking temperature, the same results can be achieved time after time, giving chefs the consistent results they strive for to delight their guests. Higher quality dishes can translate into increased revenues by charging more on menu's, increased customer satisfaction and the potential for repeat business.
- **Unique Preparation:** Another revenue enhancer is menu uniqueness. Because of the moderate and consistent temperature characteristics of sous vide cooking, there are some food preparations that are extremely difficult if not impossible to cook any other way. "Custard" eggs are one good example. Put simply, these are soft-boiled eggs, but with a custard-like consistency that a traditional soft-boiled egg won't have because of the higher temperature gradient involved in cooking. French-style scrambled eggs are another example of a preparation unique to the sous vide technique. These are an almost custard-like, creamy style of scrambled eggs, that are much tastier than the sometimes rubbery, pan/microwaved version. Pâtés and mousses are further examples of sous vide prepared foods that are more difficult to achieve using more traditional cooking methods. Sous vide pork chops offer another example, with medium-rare pork chops very difficult to safely prepare using other techniques.



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- **Nutritional Benefits:** When cooking using the sous vide technique, harmful changes to nutrients and minerals caused by cooking at high temperatures are greatly reduced. What's more, as these ingredients are locked in a sealed vacuum pouch, key nutrients are maintained, meaning more succulent, healthier results. For vegetables and fruits in particular, this also means better taste and texture - no more mushiness. All these details allow the establishment to promote itself as a supplier of quality - enhancing its reputation and thus generating enhanced revenues.
- **Improved Menu Planning:** Once sous vide equipment is introduced to the commercial kitchen, menu planning is made easier due to the capability to simultaneously cook different types of food together. For example, different kinds of meats such as beef, pork and lamb can be prepared at the same time without mixing flavours. Similarly, a range of vegetables can be prepared and cooked at the same time, without loss of quality. The fact a number of different ingredients and dishes can be created simultaneously allows easier menu planning, allows chefs to easily vary their menu's and streamline service.
- **Enhanced Beverage Offerings:** For cutting edge mixologists, the key ingredient is flavour. Those who infuse fruits and other ingredients with liqueurs using the sous vide technique do so because it gives cocktails a fuller, more lively taste. Another benefit of using the sous vide technique to infuse liqueurs is time. Mixologists can create base ingredients for cocktails in a fraction of the time in comparison to the traditional soak, store and wait approach, again further enhancing the potential for enhanced revenues.



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Direct & Compound Sous Vide Cooking:

The Advantages:

The sous vide food preparation process can be broken down into two categories. "Direct" sous vide food preparation refers to the situation where at the end of sous vide cooking, the resulting food product(s) are finished immediately, plated and served. "Compound" sous vide preparation refers to the situation where after the sous vide cooking process, the results are quick chilled and refrigerated for finishing and serving at a later date.

Both Direct and Compound sous vide food preparation bring significant cost reductions:

- **Lower Recipe Ingredient Costs:** By vacuum sealing ingredients, sous vide cooking significantly reduces the level of herbs, spices, seasoning, oils and other marinades needed to achieve the desired flavour, compared to high temperature open air processes.
- **Less Portion Shrinkage:** By vacuum sealing and cooking sous vide rather than using other cooking techniques such as pan frying or oven cooking, portion shrinkage is reduced by an estimated 5 to 15%, depending on the food type. For example, in the case of chicken breasts, which typically have a high moisture content, five sous vide chicken breasts will produce the same yield as six chicken breasts cooked using other methods, not to mention sous vide chicken is more tender and juicy.
- **Turn Cheaper Cuts of Meat into Premium:** The sous vide technique enhances less expensive cuts of meat into premium quality results. A brisket, tri-tip or chuck roast can be purchased for half the cost of a premium cut such as a tenderloin or rib eye. When a lower cost cut of meat is cooked sous vide at a medium rare temperature for 48 hours, the texture is very similar to that of a rib eye for a fraction of the cost.
- **Lower Energy Consumption:** Because of the high temperatures involved, the energy usage of conventional gas or electric ovens is a substantial cost for any commercial kitchen. These high temperatures can also cause the ambient temperature of the kitchen itself to be very warm. Sous vide equipment uses only a fraction of the energy cost required to cook any dish when compared to conventional techniques for the same menu item, and so could offer a significant cost saving to the business.



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- **Enhanced Kitchen Multi-Tasking:** Because the sous vide process cooks food at precise temperatures that will not result in burning or otherwise over-cooking, chefs and kitchen support staff can simply set the sous vide equipment to the desired cooking temperature and time, place the vacuum sealed food in the water vessel and immediately move on to other tasks without needing to constantly return to check the cooking process. With the exception of a few delicate recipes, the sous vide process is time-forgiving, meaning that foods can be left in the sous vide cooker for considerable times beyond the set finished time without over-cooking or losing quality in any way. For more robust cuts of meats such as beef, lamb and pork for example, the time forgiveness window can be as much as four hours beyond the original set time.
- **Reduced Staff Costs:** As detailed above, the sous vide technique yields a number of advantages. With the technique being so simple to master, commercial kitchens could also potentially save money on higher paid personnel by recruiting lower cost personnel who can still produce the desired results. While training would initially be required - namely in food preparation, operating a vacuum sealer, food storage, finishing and serving, sous vide cooking is incredibly straightforward to master and could be incorporated into any professional kitchen with little to no disruption to service.



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Additional Cost Benefits:

With Compound Sous Vide Cooking:

- **Significantly Less Food Wastage:** The fact that foods cooked sous vide are sealed in cooking-grade pouches and cooked at controlled temperatures reduces food waste considerably. Food that is cooked, but not served immediately, can be quick chilled in its bag in an ice-bath and refrigerated without any loss in quality. It can then be reheated at the temperature to which it was originally prepared and served the next day. For example, if a restaurant prepared twelve steaks sous vide for its evening service, but only served eight that day, the remaining four could be quick chilled, refrigerated and used either in steak salads or steak sandwiches for lunch the next day or placed again in the sous vide cooker, finished off and served the next evening with the same quality as the previous evening when they were originally cooked. This is just one example of how an establishment can significantly reduce its food wastage, resulting in lower operating costs.
- **Time Savings by Cooking in Advance:** Where a large number of covers must be ready at precisely the same time, the sous vide process offers a major advantage. Very large quantities of menu items can be prepared in advance by quick chilling and refrigerating, without loss of quality. When the food is needed, the chef would simply need to reheat the ingredients in the bag to its original temperature, finish and serve. This advance preparation through the sous vide technique reduces the time to serve food and the personnel required to finish each dish.



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A Worked Example:

It is difficult to accurately calculate the financial implications of introducing sous vide into a restaurant without understanding some of the key parameters such as size, number of covers, menu offering and frequency of use of the sous vide equipment itself. The worked example on the next page shows some of the cost savings that might be expected from introducing the sous vide technique to a medium sized restaurant under two slightly different scenarios. Other possibilities can be drawn out of this example by altering some of the assumptions detailed below.

Assumptions:

- Establishment weekly revenue range: £20,000 - £25,000 (€25,000 - €32,500)
- Food costs are 30 - 35% of revenue
- Sous vide is applied to only 10 - 15% of the menu
- Sous vide food cost savings are only 3 - 5% for items where sous vide is applied
- Labour costs (assume 20 - 25 employees) ranges from 30 - 35% of revenue
- Labour reduction ranges from one employee being reduced to part time to one employee no longer required
- No establishment revenue increase is assumed

As presented in the table on the next page, under these assumptions, cost savings from introducing sous vide can range from £198 to £503.13 (€247,50 to €654.06) per week, or £10,296 to £26,162.76 (€12,870 to €34,011,12) annually for a medium sized independent restaurant.



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Variable	Scenario 1	Scenario 2
Estimated Weekly Restaurant Revenue (£/€)	£20,000 (€25,000)	£25,000 (€32,500)
Percentage of Weekly Revenue Allocated to Food	30%	35%
Food Costs (£/€)	£6,000 (€7,500)	£8,750 (€11,375)
Percentage of Sous Vide Cooking Incorporated into Service	10%	15%
Value of Sous Vide Food Incorporated into Menu (£/€)	£600 (€750)	£1,312.50 (€1,706,25)
Percentage of Savings from Preparing Sous Vide Food	3%	5%
Value of Savings from Preparing Sous Vide Food (£/€)	£18 (€22,50)	£65.63 (€85,31)
Labour Costs as a Percentage of Total Restaurant Revenue	30%	35%
Labour Costs (£/€)	£6,000 (€7,500)	£8,750 (€11,375)
Labour Cost Percentage Reduction by Introducing Sous Vide into Service	3%	5%
Labour Savings from Introducing Sous Vide into Service (£/€)	£180 (€225)	£437.50 (€568.75)
Total Weekly Savings from Introducing Sous Vide (£/€)	£198 (€247,50)	£503.13 (€654,06)
Total Annual Savings from Introducing Sous Vide (£/€)	£10,296 (€12,870)	£26,162.76 (€34,011,12)



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The investment required for introducing sous vide cooking to a commercial kitchen is of two parts – equipment and setup.

Equipment: The equipment needs depends entirely on the nature of the business and how prominently sous vide will feature in the kitchen. Over the last few years, the market has been overwhelmed by a number of inexpensive consumer products from Asia. However, if sous vide is to form a central role in foods preparations, choosing a more established, high quality, reliable and accurate sous vide solution is a must, as cheaper products will leave users with an unreliable machine which would be more likely to fail at a critical time. Most established sous vide manufactures offer a one year warranty, with the more premium brands offering two years or more on their products. There are a number of professional equipment options available, typically costing between £450 (€550) and £1,200 (€1,500) depending upon accuracy, capacity, country of manufacture, reliability and warranty. To this, typically a vacuum sealer would cost in the region of £200 (€250) to £2,000 (€2,500), again dependent on individual requirements. Additional accessories such as digital temperature thermometer kits and lids may add another couple of hundred pounds / euros. For the examples detailed on the previous page, a total investment in the range of £2,000 (€2,500) for the low scenario and £4,000 (€5,000) would be expected.

Setup: As with any new equipment, training on how to use sous vide equipment would be needed beforehand, although this is normally minimal and would cover items such as how to operate the sous vide equipment, food safety and how to operate a vacuum sealer effectively. This is determined by the extent of sous vide usage in the kitchen, together with the extent to which HACCP (Hazard Analysis Critical Control Point) procedures need to be put in place, with legislation differing by geographical location. A wealth of resources, recipes and cookbooks are also available online to support getting started. HACCP training is straightforward and can be done online or at a number of registered training centres. These courses typically cost between £40 (€50) and £160 (€200).

Therefore, total initial investment for a medium sized restaurant to successfully introduce sous vide onto its operations can be expected to be between £1,500 (€1,900) and £4,000 (€5,000), dependent on the extent of introduction. Note, this incorporates an estimate of labour costs to train etc.

Return On Investment (ROI): The worst case scenario of introducing sous vide into a medium sized restaurant would yield an investment payback time of 21 weeks (low scenario with high initial investment) with a best case scenario of as little as just under 3 weeks (highest sous vide savings and low initial investment). From this point onwards, additional savings would simply contribute to enhanced revenues and profitability.

It is important to note, that even if cost savings were halved, the introduction of sous vide cooking into any commercial establishment would yield a positive return on investment, just over a longer timescale. The introduction of sous vide is also not limited to just fine dining restaurants, but could have similar positive outcomes in Cafés, Cocktail bars, Street food vendors and other catering initiatives.



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Benefits Of Implementing Sous Vide:

Weekly Restaurant Revenue Example:

	Scenario 1 Revenues of \$20,000 (€25,000) a week	Scenario 2 Revenues of £25,000 (€32,500)
Percentage of Sous Vide Cooking Incorporated into Service	10%	15%
Value of Savings from Preparing Sous Vide Food (£ / €)	£18 (€22,50)	£65.63 (€85,31)
Labour Savings From Introducing Sous Vide into Service (£ / €)	£180 (€225)	£437.50 (€568,75)
Total Weekly Saving From Introducing Sous Vide (£ / €)	£198 (€247,50)	£503.13 (€654,06)
Total Annual Saving From Introducing Sous Vide (£ / €)	£10,296 (€12,870)	£26,162.76 (€34,011,12)



About Grant Creative Cuisine

Introducing Grant Creative Cuisine, a complete range of high quality consumer and professional sous vide equipment including portable immersion circulators and water baths. With over 60 years experience designing and manufacturing sophisticated fluid temperature control systems, Grant has a worldwide reputation for the highest levels of quality, reliability, service and support.

All manufactured in the United Kingdom, Grant includes a range of tools, from the Uno sous vide controller and Primo range water baths for the at-home cook to the Pasto water baths and Vortice portable immersion circulator for the professional chef. All Grant products are offered with full product warranties and are the preferred choice of leading chefs around the world due to their quality, reliability and durability.

Join the sous vide community

For further information:

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