

Airline CATERING

I N T E R N A T I O N A L

SHOWCASE2011

What's inside?

- Implementing buy-on-board
- Trends in galley design
- Presentation ideas

THE INTERNATIONAL REVIEW OF INFLIGHT CATERING AND ONBOARD SERVICE

perfectsense

HOW SCIENCE CAN HELP YOU TO OVERCOME
THE TASTE-STRIPPING CABIN AND PUT
ZING INTO YOUR INFLIGHT FOOD



TECHNOLOGY

mgs



P/N: MR4AA1-01
Model: microwave



P/N: HFES0028-20
Model: Nespresso maker



P/N: HFA2000-10
Model: beverage maker



P/N: HFWF2003-01
Model: trash compactor



P/N: FT048
Model: folding trolley



P/N: HFE2007-01
Model: espresso maker



P/N: MK190
Model: full size trolley

mgs



P/N: R4AD2-01
Model: induction oven

INNOVATION

mgs



P/N: IHP4
Model: induction hot plate



P/N: HFA2007-01
Model: beverage maker

IACOBUCCI HF GROUP



P/N: HFE95-20D10
Model: Nespresso maker



P/N: HFAWB2005-01
Model: water heater



P/N: MB0000750
Model: trash compactor box



P/N: HFWH2003-02
Model: trash compactor



P/N: 9501D
Model: espresso maker

mgs



P/N: AAD4-07
Model: induction oven



P/N: HFN2007
Model: beverage maker



P/N: HFA28V
Model: beverage maker

CARE



P/N: HFE95-20D
Model: espresso maker



P/N: SHF2010-002
Model: vip seat



P/N: HFWH0028-02
Model: trash compactor



P/N: MK279-00
Model: half-size trolley



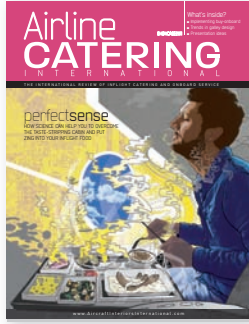
P/N: HFEJ2008-10
Model: Nespresso maker

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P/N: HFAWB2007-01
Model: water heater

TRADITION



talkingsense

It may be an unfashionable view, but I love airline food. As an infrequent flyer, still wide-eyed at the miracle of getting such a huge lump of metal into the air, inflight meals (even in economy) have a novelty value and charm all of their own. It almost doesn't matter what they taste like, so long as I can play around with containers of this and sachets of that; fun and dinky packages that I can treat like edible lego.

But apparently, not everyone shares my playfulness. Airline food is frequently maligned, with a lack of taste often cited as the source of discontent. What many passengers don't realise (and how could they?) is that there are a wide array of problems stacked against inflight fare from the outset. Some may be obvious – time and space restraints in the cabin, health and safety issues, tight wallets in a challenging oil landscape, logistics, etc. Beyond these, there are other factors that can scupper even the most careful and well-funded airline, for the cabin environment itself conspires against the inflight caterer. The air pressure, lack of humidity, reduced oxygen levels and even background noise can affect the way we perceive taste, as you can see in our feature on page 28. It turns out fabled Greek writer Aesop was on the money when he apparently said, "A crust eaten in peace is better than a banquet partaken in anxiety".

However, it's not all doom and gloom. Airlines are bearing these findings in mind when designing their menus, to come up with food better prepared to stand up to the cabin environment. And suppliers are stepping up to the plate with new ways of cooking on board (page 34), ready-made products to spruce up plain fare (page 50), and even drinks to target jet lag (page 52). Meanwhile, developments in galleys and their inserts (page 20) continue at full pelt, ensuring the onboard equipment can match improvements in the food itself.

The growing utilisation (and acceptance) of buy-on-board schemes (page 14) could also revolutionise airline food. It gives the airlines a bigger budget to offer truly special fare, and can be marketed alongside free food as an upgrade rather than a money-making exercise.

But as I touched on earlier, taste is not something that happens purely in the mouth – it is informed by all our other senses, and sight is one to overlook at your peril. Good presentation and clever packaging can play a huge part in customer satisfaction. With that in mind, we've compiled our favourite examples on page 10 to give you some food for thought. It appears I'm not the only one who likes to play with food.

Izzy Kington, editor

TASTE IS NOT SOMETHING THAT HAPPENS PURELY IN THE MOUTH – IT IS INFORMED BY ALL OUR OTHER SENSES, AND SIGHT IS ONE TO OVERLOOK AT YOUR PERIL

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published by **UKIP Media & Events Ltd**

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Airline Catering International
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Printed by: William Gibbons & Sons Ltd.
P.O.Box 103, 26 Planetary Road
Willenhall, West Midlands, WV13 3XT
Cover image: Chris Ede

Aircraft
interiors
INTERNATIONAL

Airline Catering International
is an annual supplement to
Aircraft Interiors International magazine
www.AircraftInteriorsInternational.com

starters

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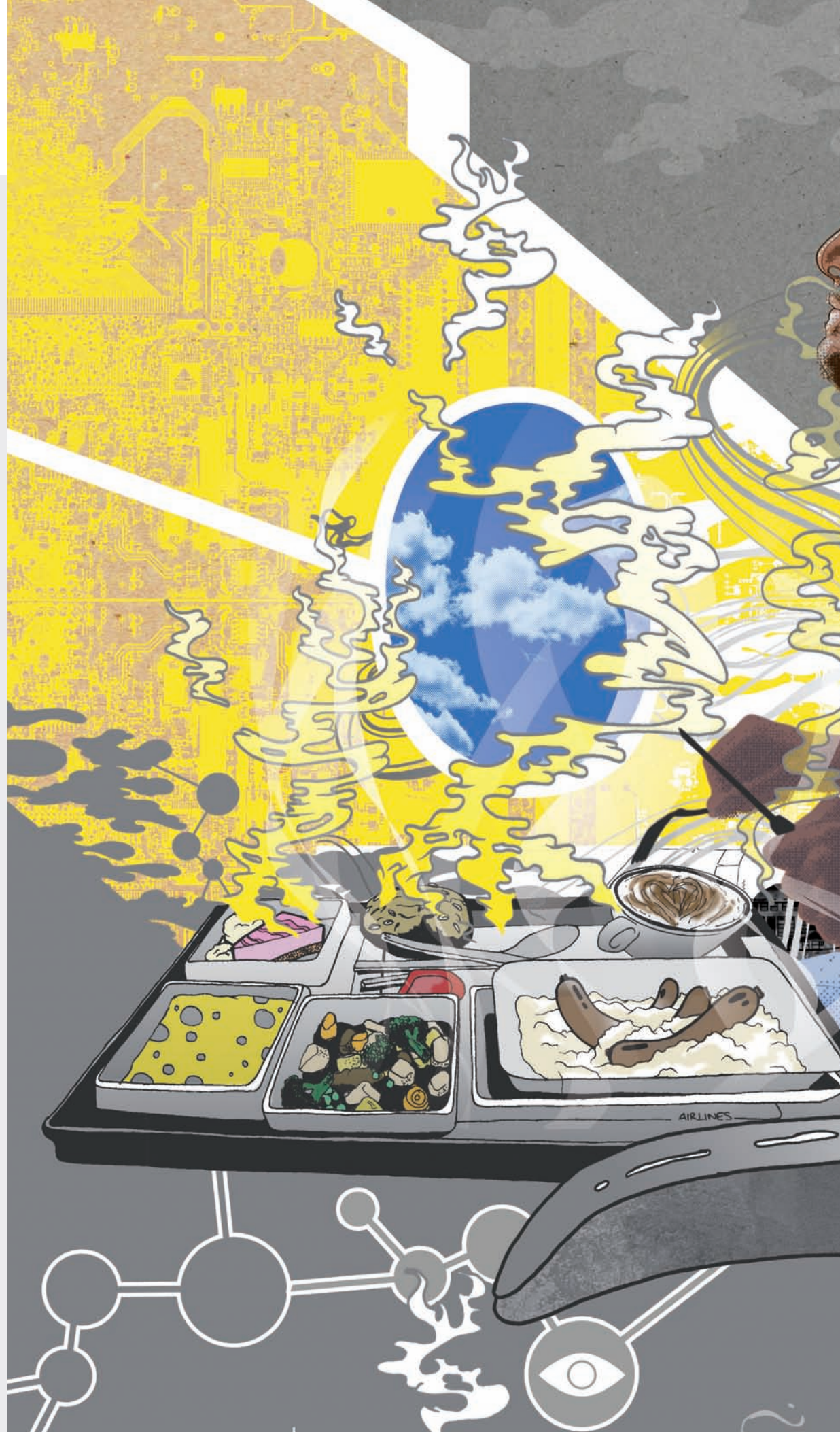
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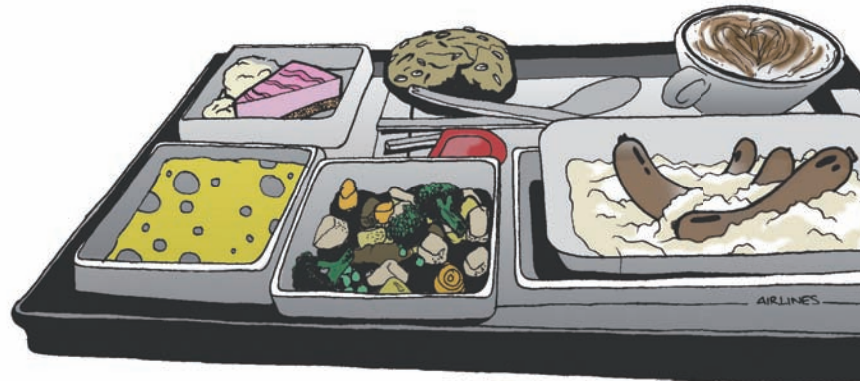
light relief

Jetway presents no-calorie beverages that target jet lag to keep crew and passengers refreshed

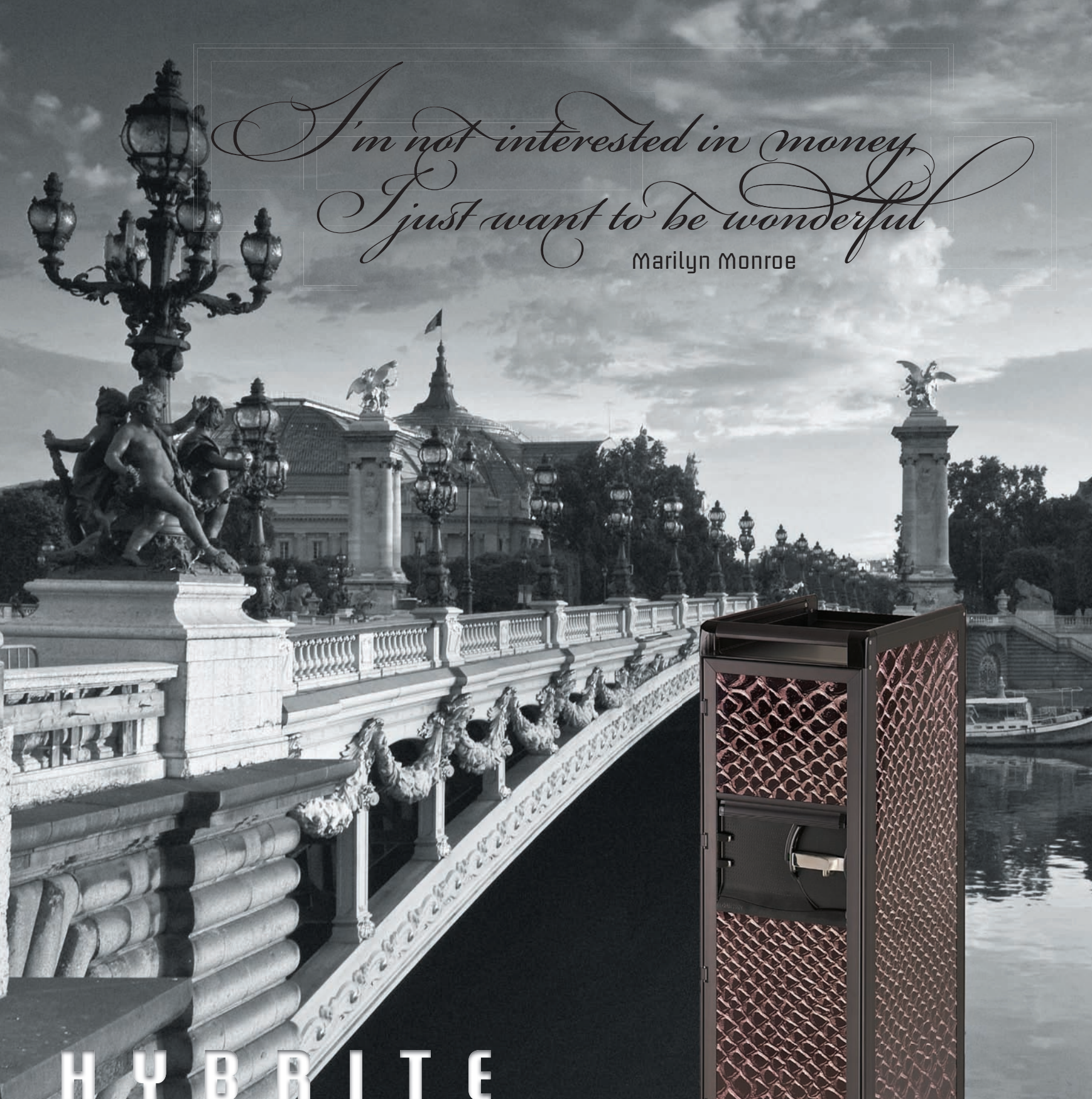
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lighten up

Replacing glass bottles with MLPET could save weight, space and energy, says Ratcliffe & Brown Wines & Spirits



*I'm not interested in money,
I just want to be wonderful*
Marilyn Monroe



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CABIN INTERIORS
Galley & Equipment

**ZODIAC
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WHAT IS YOUR ROLE IN CHOOSING INFLIGHT MENUS? I am involved in the entire process – including menu design, food tasting and quality control of the inflight menu.

HOW OFTEN DOES DRAGONAIR REFRESH ITS MENUS? We usually refresh our inflight menu once a year, but the menu is rotated every two weeks. This is particularly appreciated by our frequent flyers. On flights to and from Beijing and Shanghai, we also offer a Daily Special entrée option for every day of the week during lunch and dinner meal service. Dragonair also partners with famous restaurants, some Michelin-starred, in Hong Kong, Beijing, Shanghai, Taipei and Kaohsiung, to bring their signature dishes inflight. This kind of promotional menu usually changes once a year. On routes with more than one restaurant partner, we swap the menu once every three months.

DO YOU TAILOR MENUS FOR SPECIFIC ROUTES? We pay close attention to customer preferences, which vary over time and across regions and cultures. We bring in local specialities on different routes to match customer preferences and the local dining culture. For example, we serve curry dishes on flights to Phuket, bibimbap (Korean-style mixed vegetables on rice) on flights to Busan, and dim sum on flights to mainland China. As a general principle, the menu includes at least one Asian and one Western main course.

WHAT OTHER FACTORS AFFECT YOUR CHOICE OF MENU? While choice is limited, we try to ensure the options match customers' taste in general; so strong flavours are avoided. For main courses, each choice must be of a different protein type to fulfil customer needs. Ingredients have to be fresh and of high quality at all times to ensure the overall quality. This is also important as human tastebuds become less sensitive at higher altitude, meaning dishes served in flight usually have a stronger flavour than those served on the ground. The stronger taste does not necessarily come from seasoning but from the essence of the finest ingredients. We also pay attention to the proportion of meat and carbohydrates, and the overall nutritional value. The constraints of inflight cooking are another consideration. As food served in flight has to be reheated, juicy meat such as mutton is an ideal choice for main courses because it can retain its juiciness and tenderness even after reheating. Beef is usually broiled as it remains tender upon reheating.

WOULD YOU CONSIDER A BUY-ON-BOARD SCHEME? Food and beverages are complimentary in all classes on our flights. There is no plan to introduce buy-on-board schemes.

WHAT MENUS ARE YOU PARTICULARLY PROUD OF? One is our recently launched Hong Kong Delights inflight menu, which highlights Hong Kong's dining culture. We aim to offer Hong Kongers a comforting taste of home when they are flying, while introducing overseas visitors to the rich complexities of the city's eating experiences. More than 60 specialities and dishes, which include main courses, rice and noodles, pastries and desserts, are being served in phases starting from July 2011 on various routes. Customers can try iconic items such as Hong Kong-style milk tea, egg tarts, pineapple bun with butter, braised beef brisket, fishballs with rice noodles, hot pot rice and long-boiled soup. There are also seasonal dishes such as hot pot rice and



Kim Chong, manager of catering services for Dragonair, gives a behind-the-scenes account of some of the airline's initiatives – from restaurant tie-ins to special seasonal fare



winter melon soup. We have spent considerable time with our catering provider to design the menu and ensure that the dishes taste as good in the air as they do in the city's restaurants. We have gone through much trial and error during the menu development stage. For example, in developing the egg tarts, we had to reduce cooking and delivery time to minimise the loss of water in the crust, as water could easily be lost after freezing. Another initiative that I am proud of is the seasonal menus we have developed for first class, such as crab roe dishes and steamed rice in hot pot casserole in the winter. These are well-received. Because of its popularity, we will extend the steamed rice in hot pot casserole menu to business class this year.

DRAGONAIR OFTEN TEAMS UP WITH RESTAURANTS – HOW DOES THE PROCESS WORK? At Dragonair, we are experienced in bringing signature dishes from renowned restaurants on board. These promotional menus always win strong support from our passengers. First of all, we identify famous restaurants and approach them for discussion. Sometimes this can be the other way round. We also visit the restaurant to see if it is suitable for Dragonair's branding and positioning. The restaurant proposes a number of dishes for preliminary tasting; we then evaluate the feasibility and suitability of featuring the dishes in flight. Then we shortlist the dishes for fine-tuning and modifications, if necessary. Our inflight meal caterer then prepares the selected dishes under our restaurant partner's guidance and instructions. A tasting session is conducted again to ensure the quality is maintained. Once the menu list is confirmed, we will select relevant dishes to be featured in each meal cycle.



*It is the species
most responsive to change
that survives*

Charles Darwin



HYBRITE




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WHY DID YOU CHOOSE LUKE MANGAN TO CREATE THE NEW MENU?

We've been working with Luke on our V Australia business-class menus since 2009. Luke shares our vision of providing high-quality, fresh, Australian and locally sourced ingredients in our onboard menus, and we wanted to work with Luke to develop this vision in our domestic experience. We really wanted to work with Luke to design a menu range that encompassed gourmet local products to create a unique dining experience on board. Our new buy-on-board menu has really set a new standard in retail menus in Australia, with high-quality fresh food options.

WHAT'S ON OFFER?

In our short-haul operation we have three products. Business class is currently available on our coast-to-coast services on the A330 aircraft. This is a premium, international-style business-class offering which includes three-course gourmet plated meals and a premium bar selection. Then we have Flexi meals – our guests who purchase Flexi fares receive a complimentary meal on board, which varies throughout the day. The current Flexi menu includes a gourmet Luke Mangan wrap for lunch. Finally, we have Retail – other guests in economy class are able to purchase their selections from our new buy-on-board menu.

HOW WAS THE MENU DEVELOPED?

The development process took a number of months and involved a wide range of stakeholders including Luke Mangan's team, our in-house product, catering and service design teams, and our catering suppliers. For such a major change – which included developing the buy-on-board offering and creating a completely new business-class menu – this process has been remarkably quick.

WHAT WERE THE MAIN CHALLENGES?

Our key challenges were sourcing unique products that reflected our desire to have local, fresh ingredients on board, and achieving that consistency around our large short-haul network. We of course have very high food safety standards and it's always a challenge to find suppliers right around our network that are accredited to these standards. The final challenge is finding space on board to fit all these fantastic products we'd sourced – real estate is a premium in an aircraft galley and it's a puzzle to get everything fitting in!

IS ANY OF THE FOOD PREPARATION DONE ON BOARD?

For our coast-to-coast business-class service on the A330 our cabin crew plate each individual meal on board – in-fact we're the only airline in Australia to offer plated meals domestically. This not only allows us to tailor meals to our guests' individual needs, it reflects the importance we place on providing the freshest, local food right to the plate. All of our coast-to-coast meals are prepared fresh for each flight in our catering facilities.

HOW IS THE NEW FOOD HELPING YOU TO COMPETE?

Our new coast-to-coast business-class product sets a new benchmark for transcontinental business class in Australia – it's pitched at an international standard and our food and beverage selection provides our guests on these routes with an exceptional dining experience. Meanwhile, in economy, our guests have access to a range of locally sourced, fresh products accompanied by premium snack and wine ranges. We feel we've really set a new standard for buy-on-board menus in Australia.



Martin Daley, group executive of product and guest services at Virgin Australia, on the airline's collaboration with top chef Luke Mangan for its new domestic business-class menu and buy-on-board options

**HOW DO THE BRANDED SNACKS COMPLEMENT THE MAIN MENU?**

Luke's branded gourmet sandwiches, wraps, salads, pies and juice all provide our economy-class guests with access to fantastic fresh, gourmet products at an affordable price. They are available in the economy cabins on all flights operated by Virgin Australia, Pacific Blue and Polynesian Blue.

DO YOU HAVE ANY PLANS TO WORK AGAIN WITH MR MANGAN?

We have a strong partnership with Luke Mangan and we see our partnership continuing to grow in the years to come.

rebranding exercise

The addition of the Luke Mangan menu on Virgin Australia's domestic routes is part of the airline's efforts to refresh its offering in this sector. Virgin unified its Australian brand and revealed new domestic cabins – on a Boeing 737-800 and an A330-200 (pictured below) – in May 2011.

The group is consolidating its domestic and international operations in Australia under a unified brand, Virgin Australia. Domestic service Virgin Blue has already been incorporated, with international operators V Australia and Pacific Blue to follow by the end of the year.

Two of the new A330-200s are already in service, with another two due to follow in early 2012. The new Boeing 737-800 cabins are due to be rolled out across most of Virgin Australia's domestic fleet by the end of 2011.



*Everything
you can imagine
Is real*

Pablo Picasso

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eyecandy

All the best ideas for packaging, presentation and onboard service

IZZY KINGTON, AIRLINE CATERING INTERNATIONAL



1. subtle elegance

Emirates has updated its first and business cabins with white Royal Doulton fine bone china featuring a delicate relief pattern – shown here providing a subtle backdrop to a tempting trio of first-class desserts.

2. sprinkle some magic

German carrier airberlin serves national delicacy currywurst for €6,50 as part of its Gourmet Meals menu by Sansibar – available on all flights over 90 minutes. The sausage is served traditionally, in a tomato and curry sauce. It comes in a C-PET tray with a wooden fork, bread roll and a sachet of curry powder for extra flavour.

3. hard ware

LSG Sky Chefs' latest ideas for business-class service include three hard porcelain ranges. This is one of the Elegance concepts.

4. home comforts

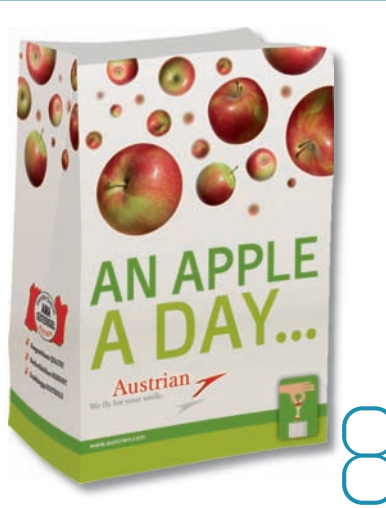
As well as taking inspiration from its home country for its menus, Italian airline Alitalia has teamed up with some luxurious and homegrown brands for its intercontinental business-class cabin, Magnifica. They include Richard Ginori for dinnerware, flatware and glassware; Frette for table linen, comforters and pillowcases; and Bulgari for amenity kits. Pictured is a new porcelain coffee cup with lid, designed by Richard Ginori.

5. perfect porcelain

Turkish Airlines is another carrier choosing fine porcelain as a backdrop for its creations. This dish is available to business-class passengers on international flights.

6. brand designs

Indian carrier Jet Airways commissioned British ceramic design house William Edwards to develop this new line of bespoke crockery. Featured in first- and business-class cabins, the new tableware has been designed to match the airline's corporate identity. As such, the hand-wrought tableware takes on the warm, rich colours and textures associated with Indian culture.



7. some assembly required

Korean Air passengers can get hands on with the traditional Korean dish Bibimbap. The word literally means 'mixed meal'. Korean Air serves it with a guide book, which includes photographs and explains how to eat it for those passengers not familiar with the dish. It is served with a special sauce (Gochujang), which should be mixed with the main dish. Passengers first need to add the bowl of steamed rice to a pot which has various vegetables and meats in. They then mix it with the Gochujang sauce and sesame oil, also included on each tray. The airline says the Bibimbap should be ready after around three minutes of DIY.

8. apple of my eye

Austrian serves healthy Austrian apples on short-haul flights. Each apple comes in its own environmentally friendly paper bag.

9. personal chefs

From October 2011, Etihad plans to offer five-star restaurant-style service with the introduction of qualified chefs in its Diamond first-class cabins. Passengers will be able to ask their personal chef to tailor-make dishes based on their particular tastes and preferences. The tools and onboard equipment are under development now. This will also enable Etihad to dedicate its food and beverage managers to business class.

10. pet project

DIF Marketing is just one supplier championing C-PET. This dish can be used for heating and serving hot meals, snacks and other food items. It boasts temperature resistance from -40°C to +220°C and is designed for great form stability.

11. firm favourite

deSter has developed a new kind of non-skid tray that eliminates the need for placemats without having to sacrifice the visual impact of using colourful and photo-realistic designs (previous non-skid designs were monochromatic). Eliminating placemats cuts weight and handling costs for airlines.

WHAT DOES IFSA HAVE PLANNED FOR THE YEAR AHEAD?

As IFSA moves into its 43rd year of association status, we remain committed to our mission as a global professional association created to serve the needs and wants of airline and railway personnel, caterers and suppliers responsible for providing services on regularly scheduled routes. IFSA's board of directors is continuing to build momentum on a strategic course to identify opportunities that provide our members increased return on their investment dollars while maintain ongoing association initiatives. We've had a number of successes. We've awarded nearly US\$300,000 (£183,719) worth of scholarships through the IFSA Foundation to date. In addition, we provide industry information through our member communications, website, World Food Safety Guidelines, and the IFSA Annual Conference and Exhibition. We also offer ongoing food safety and quality assurance programmes through our Government and Education Committee. Lastly, our strategic alliances with industry associations such as the Airline Passenger Experience Association (APEX) and the International Travel Catering Association (ITCA) allow IFSA additional opportunities to enhance membership benefits.

HOW VALUABLE IS COLLABORATION TO IFSA? In 2010, IFSA co-located with the APEX show and Aircraft Interiors Expo for the first time. This resulted in 65% more airline attendees. Now that the word has spread, we anticipate an even greater increase. This year we are co-locating again in Seattle, USA (12-14 September 2011). IFSA and APEX are co-presenting combined education sessions and social networking events. Collaboration allows IFSA, APEX and Aircraft Interiors Expo to offer a one-stop-shop industry 'super show', which enables exhibitors to meet with more customers and attract valuable prospects for future business opportunities.

ARE YOU PLANNING ANY FURTHER COOPERATION?

IFSA will continue to seek out and work with related industry organisations to identify those opportunities that provide additional value to our members.



Vicky Stennes, president of the International Flight Services Association (IFSA), and vice president of inflight experience at JetBlue Airways, on the association's latest initiatives

**WHAT CAN WE EXPECT FROM THE IFSA/APEX EDUCATION SESSIONS?**

With the combined buying power of IFSA and APEX, we are able to attract an array of high-calibre speakers. As such, the committees of both groups have been working very closely together to develop sessions that would appeal to a cross-section of attendees. The shared sessions will be geared towards both IFSA and APEX members. The speakers have been provided background information on both associations so they may tailor their presentation to the respective memberships.

WHAT'S NEW WITH THE IFSA ANNUAL CONFERENCE AND EXHIBITION?

This year's Chef's Competition will offer a new and exciting format. In previous years, all judging took place in the catering kitchen, where the chefs prepared their dishes. With the popularity of shows such as Iron Chef and Chopped, this year will involve a new twist. Judging for the 2011 competition will take place right on the tradeshow floor, and allow conference attendees to see the chefs in action, while also hearing the judges' feedback during their evaluations. The excitement of a live competition will ensure that the chefs receive heightened exposure and provide a memorable experience for attendees.

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payasyoufly

The cashless cabin is driving onboard sales of food and beverages

SELWYN PARKER, AIRLINE CATERING INTERNATIONAL

Eliminating free food may have started out for many as a cost-cutting measure in the wake of 9/11, but now more and more airlines are realising there is money in offering passengers more choices.

One such airline is Delta. "At Delta, in the beginning it was about cost reduction, but now we're seeing onboard payment programmes for food as a way of generating extra revenue over time," says Megan Ireland, general manager for onboard services at the airline. "We're constantly testing new products on different routes."

Of course, many airlines allow customers to buy meals ahead of their flights, but going one step further, to enable onboard purchases, means airlines can take advantage of impulse buying. Actual and imminent breakthroughs in payment technologies are starting to boost inflight food and beverage sales to levels that were thought improbable even two years ago. As transaction systems embedded in mobile phones and other individual handheld devices become more robust, airlines feel more confident in rolling out a greater variety of menus that serve to increase ancillary income.

Thus airlines are moving to embed technologies such as GuestLogix's

OnTouch system, which enables passengers to make purchases in flight. GuestLogix says the OnTouch system is currently being migrated into Europe (Aer Lingus), Asia (Qantas) and North America (Spirit).

FIGHTING FRAUD One aspect of buy-on-board schemes that has been offputting for some airlines in the past is the risk of fraud – because most card payments aren't authorised until the passenger is back on the ground. ARINC is one company with a solution to this potential pitfall.

"Our live credit card authorisation means that airlines can take onboard payments and be sure the transactions aren't fraudulent and that the payments have gone through in real time," says Nicole Grainger, ARINC's solutions manager for satellite services and cabin services in Europe, the Middle East and Africa. "Airlines can offer larger ticket items with significantly reduced risk. They can also offer an onboard retail portal with partner goods and services as a way of generating additional revenue, sponsorship and advertising."

GuestLogix also offers real-time credit and debit card authorisation. The technology is based on open platform architecture that integrates with any

connectivity provider. As well as reducing fraud, the company says the solution lowers airlines' credit card processing fees, as all transactions are executed using a PCI-compliant end-to-end design.

The adoption of new onboard technology, such as WiFi, could herald even greater security. "Faster WiFi will make payments more secure and allow airlines to offer a wider selection of products with a higher range in price points," says Richard Cushing, vice president at GuestLogix.

Cushing also envisages WiFi increasing advertising opportunities. "Airlines will be able to stream WiFi to passengers' personal devices," he says. "This will enable them to deliver information about food and beverages, products and services and other onboard offerings."

RAPID ADOPTION The integrity of the new wave of systems is encouraging airlines to adopt the cashless cabin. Until now, AirAsia X has insisted on cash transactions with change given only in Malaysian ringgit, but now plans to introduce non-cash payments. "Non-cash payments will allow us to increase sales in flight because they will encourage purchases of merchandise



01-03. Desserts offered for onboard purchase on ANA
04. GuestLogix's OnTouch retail platform





Box Office Disney

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05

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THE NEAR FUTURE COULD SEE PAYMENTS MADE BY PASSENGERS OFF THEIR MOBILES AND COMPUTERS 99

and duty-free items as well as food and beverage,” says Chain Kien Song, head of ancillary at the airline. At AirAsia X, food and beverage sales account for about 20% of ancillary income.

Although the cashless cabin is now over two years old, so far payments have been made mainly by credit or debit card through a handheld device. But the near future could see payments made by passengers off their mobiles and computers, plus the expansion of seatback ordering through the IFE.

Virgin America is pushing this technology, enabling passengers to order food and drink via its Red IFE platform, which is based on Panasonic's eX2. In 2010 it updated it to make 'anytime' ordering possible. Passengers simply swipe their card once and keep a tab open throughout the flight, ordering what and when they want while cabin staff compile the orders off a seat-map LED screen. Sales of cocktails, especially under a recent

pairings deal – a drink and snack combo – have boosted revenues.

As well as the fiscal benefits, the airline says on-demand ordering makes service more efficient. “We tend to eschew the typical trolley cart service and focus on tray-served, which actually helps keep the aisles clear and helps guests get served a lot faster,” says spokeswoman Patricia Condon.

Following Virgin America's lead, All Nippon Airways has invested in seatback touchscreen technology (again based on Panasonic's eX2) on its Boeing 777-300ER to allow economy-class passengers to order business-class meals and drinks – although the service is “temporarily suspended”.

MATCHING DEMAND Technology aside, airlines have learned a lot over the last few years about streamlining food and beverage offerings in what can be a challenging logistical exercise. easyJet has rebooted its onboard retail

hybrid models

Although some airlines (notably in the low-cost sector) offer only paid-for food, some traditionally full-service carriers are getting in on the act by offering a hybrid model. They see selling food as giving passengers more options.

For example, from 14 September 2011, KLM will offer pre-ordered, pre-paid meals in economy on intercontinental flights from Amsterdam – alongside its standard complementary menu. Passengers can choose from a free meal or from four paid-for options – Healthy Japanese, a light Japanese meal; Bella Italia, featuring popular Italian dishes; an Indonesian rice table, featuring various traditional dishes; and a vegetarian meal. They are available at prices ranging from €12-15 (£10.50-13.12).

“KLM ran a successful trial with à la carte catering over the past year on flights to eight destinations departing from Amsterdam,” says Erik Varwijk, KLM's managing director. “This is a further response to growing customer demand for customised services, offering more choice and more options for customers in determining their own flight experience.”

Passengers can place their meal orders from 90 days up to 48 hours ahead of departure. The airline will also trial the scheme in World Business Class from October 2011. Passengers flying World Business Class on flights to Cape Town and Singapore will be offered a choice of five extra, specially created meals from the à la carte menu.

05. Part of the Bella Italia meal from KLM's new à la carte menu

and stocking systems to better match up product with demand – it started out by offering German beer on French routes and vice versa. And earlier this year, it was reported that the loading of a wrong cart ended up with bacon baguettes and ham melts on a kosher Tel Aviv flight.

Directional menus are important too. Delta offers different options out and back between Los Angeles and Atlanta. It may only be a different kind of sandwich but, says Ireland, passengers appreciate the difference. On certain trajectories there are special themed menus, such as on Alaska Airlines' and American Airlines' flights to Hawaii.

Many airlines are also tailoring their offerings to particular types of customers. Healthy options abound, as do children's treats. For example, Delta recently launched a kid's plate on North American flights, which retails at US\$4.50 (£2.77). Parents can also scoop up Ben and Jerry's ice cream for



06

brand power

Long a staple of full-service, business-class menus, celebrity chefs are invading the pre-ordered, pre-paid offering in economy. While Delta has experimented with chef-designed food and dropped it (“passengers just didn’t want it,” according to Megan Ireland, general manager for onboard services), other airlines are persevering. For example, all airberlin flights of an hour or longer offer gourmet meals designed by Herbert Seckler of the Sansibar restaurant on Sylt. And on All Nippon Airways’s flights to North America, Europe and some Asian routes, passengers can buy dishes developed by Japan’s Yuji Wakiya and Michelin chef Masayasu Yonemura. Even low-cost AirAsia X is considering endorsements by celebrity chefs for meals on selected routes.

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SO FAR, AIRLINES HAVEN’T LEARNED HOW TO PREDICT DEMAND FOR PAID FOOD AND BEVERAGES SO ACCURATELY THAT THEY CAN ELIMINATE WASTE

99

US\$2.50 (£1.54) to keep the kids happy on lunch or dinner flights longer than 1,800 miles; and Wrigley’s gum for US\$2 (£1.23).

Most airlines report similar general trends in demand. The longer the flight and the closer it is to breakfast, lunch or dinner, the higher the sales. And most passengers prefer food similar to what they would eat at home – for example Quaker oats around breakfast time for US passengers.

On shorter flights (particularly in the USA), the choice is between snacks. American Airlines offers everything from MegaBite chocolate chip biscuits (US\$3.29/£2.02) to bags of nuts (US\$4.49/£2.76) on flights of less than two hours; a breakfast option of oatmeal, dried fruit and nuts (US\$6/£3.69) on flights of two to three hours; and a bigger breakfast box of oatmeal, raisins and yoghurt (US\$6) on all flights over three hours long.

AirAsia is unusual in serving pre-ordered hot meals on flights less than one and a quarter hours long. It’s also unusual in giving discounts of up to 25% on pre-paid meals including vegetarian, western and Asian cuisines. AirAsia X’s chief executive, Azran Osman-Rani, says he may update the



07

food offering when the airline moves to London Gatwick in October 2011. “It will challenge the caterers,” he says.

REDUCING WASTE Try as they might, so far, airlines still haven’t learned how to predict demand for paid food and beverages so accurately that they can eliminate all waste. Delta’s Ireland says the airline has got better but the system is by no means perfect. “We look at a range of factors – historic sales for that flight, average take-up rates, time of day, type of item. And cabin crew give us some pretty good feedback,” she explains. “Wastage is a lot less than it was though.”

That’s thought to be mainly because Delta replaced paper-based systems

- 06. A chicken salad available to buy on Delta
- 07. All food in Air Asia X’s economy class is buy-on-board

with GuestLogix’s handhelds. The system provides real-time information about what’s hot and what’s not. “We can track customer satisfaction, and a satisfied customer will travel with us again,” says Ireland. “It’s really all about improving the passenger experience.”

“It’s also about knowing what items I could have sold if I’d had more available,” says a Delta spokesman. Growing though they are, ancillary revenues from food and beverage don’t yet make a big difference to the bottom line, but inventory-based processing systems are turning into valuable marketing tools.

The IFE system itself also has potential to be used to advertise food and beverage offering. However, its usefulness seems to be limited for the moment because of the wide variation of menus available on different routes, and especially on airlines with directional menus. Most airlines continue to rely on their websites, inflight magazines and printed menus. “We find printed menus work best,” says Ireland. “Crews hand them out like in a restaurant.”

There’s clearly a learning curve going on as airlines fine-tune their food and beverage offerings, but it seems many are devising ways of trading passengers up to higher-quality meals that boost ancillary income. And technology underpins this strategy. [C](#)

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Airbus's potentially game-changing SPICE galley may be on the horizon, but that's not stopping manufacturers from developing their own innovations

SELWYN PARKER, AIRLINE CATERING INTERNATIONAL

 The steady progress of Airbus' Space Innovative Catering Equipment (SPICE) concept overshadows the entire galley-building industry as manufacturers figure out exactly where they fit into what promises to be a new era.

Airbus fully intends SPICE to become the first new standard in over 40 years and the most recent tests look promising. SPICE is based on placing meal trays into lightweight boxes instead of traditional trolleys and then transporting them up and down aisles in folding service carts. Airbus says it should save significant amounts of time, some 400-600kg in weight and enough space to accommodate an extra two or three economy-class seats in a 250-300-seat wide-body aircraft. Because of ergonomic improvements, the concept may also save on medical bills for cabin staff.

It's even aesthetically pleasing. "SPICE is not a bad-looking galley at all," approves Baden Smith of Altitude Aerospace Interiors, which has its own exciting concepts on the drawing board, pictured left.

However, galley manufacturers aren't standing by, and innovation continues apace, for instance in the never-ending pursuit of lightness.

WEIGHT LOSS For example, TIMCO Aerosystems is rolling out its new FeatherWeight galleys for JAL that can "produce anything from 15-20% in savings over conventional galley configurations," according to Len Kazmerski, TIMCO Aviation Services' vice president of marketing and business development.

Actual weight savings vary according to the individual unit and the amount of adjustments and customisation specified by the customer.

The FeatherWeight galley concept was the result of TIMCO's designers and engineers investigating ways of removing mass that was not critical to the structural integrity or functionality of the galleys.

A lot of attention was also paid to materials, exotic and otherwise. "We made innovative use of new materials and conventional materials," adds Kazmerski. "We're still developing the



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AIRLINES WANT TO INTEGRATE THEIR CORPORATE IMAGE AND BRAND VALUES INTO THE DESIGN AND STYLING OF THE GALLEY 99



- 01. A new galley concept from Altitude Aerospace Interiors
- 02. TIMCO Aerosystems's FeatherWeight galley

FeatherWeight line of products by identifying new design approaches. We're also testing new materials. It all reduces weight and saves fuel costs."

Galleys are also becoming more durable, as they have to survive the rigours of working days up to 17 hours long. The Bucher Group, for example, claims that its new range of corrosion-free, anodised aluminium-framed galleys will last some 10-15 years longer.

CUSTOMISATION At the same time, galleys are being turned into marketing tools. Until the last few years, galleys put practicality first and aesthetics last, if at all. "Historically, galleys have been designed from an engineering and functional aspect, not from a design one," says Altitude's Smith.

But that's changing rapidly. For example, Sell's latest galleys are based on elliptical and curved forms, boast lighting features and also offer branding opportunities. "Airlines want

to integrate their corporate image and brand values into the design and styling of the galley," explains a spokeswoman for the company. "They're asking for features such as illuminated logos or roller blinds with logos applied to them."

Altitude believes this trend has a long way to go. "The first thing passengers do is walk through a totally utilitarian space," points out Smith. "You don't do that in restaurants or pubs. It's becoming more important for airlines to differentiate themselves in the market and a galley presents an opportunity to do so."

Bars – in effect, quasi-galleys with below-bencht top inserts and essential functionalities – could lead this trend. Sell already designs highly customised, specially designed bar units for its customers. Features include easily closed doors, low-touch temperature controls, insulated taps and pots and rapid operating cycles for ovens and water boilers.

all about inserts

The inserts industry is keeping pace with developments in everything from ovens to trash compactors. Germany's Sell, acquired in October 2010 by Zodiac Aerospace, is set to unveil a new series of lightweight galley inserts including an oven, coffeemaker, beverage maker, bun warmer and water boiler. This new ip-series should be available from early 2012. The new oven is 6.5kg lighter than the company's current oven.

Similarly, B/E Aerospace's latest Endura water boiler, which claims a large market share on the Boeing 787, is 30% lighter than its predecessor. B/E Aerospace is also pursuing multifunctional options such as its Selectra Gourmet insert, designed to save weight and space by providing three different functions at the push of a button – refrigerator, wine chiller (with 12-bottle capacity) and freezer.

Meanwhile, the Iacobucci HF Group, through subsidiary Modular Galley Systems, is pushing the functionality available on commercial aircraft by offering a range of induction ovens, which enable the preparation of fresh meals on board (see page 34).

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ESPECIALLY ON SINGLE-AISLE AIRCRAFT,
STANDARDISATION IS AN OPPORTUNITY TO
DECREASE COST AND LEAD TIMES 99

Similarly, Altitude's bespoke bars have been chosen by Air New Zealand and other long-haul airlines, and it's working on ways of fitting above-benchtop inserts such as ovens and water boilers that are simultaneously functional and stylish. "We believe there's an opportunity for airlines to create their own look and feel," says Smith. "This could be customised or semi-customised. A galley should be part of the brand image."

Some customisation is done purely for functional reasons rather than aesthetic ones. For example, TIMCO's FeatherWeight galleys can be reconfigured to meet airlines' specific requirements for inserts. "It may be a dimensional adjustment to meet special cabin layout requirements," explains Kazmerski. "In all cases we try to work with our customers to maximise weight-saving opportunities when there's any deviation from the standard design."

TIME IS MONEY The commercial aviation industry is always in a hurry and it expects the same from galleys. As well as rapid-fire ovens and boilers,

galleys are now being delivered in pre-certified and modular forms, designed to make any subsequent reconfigurations easier.

For example, Driessen-Zodiac Aerospace's new supplier-furnished galleys for the A320 will be modular to enable airlines to change the galley layout with pre-certified combinations, and therefore eliminate recertification costs. MaxFlex is due to be delivered to Airbus for the A320 from the middle of 2012.

As Marc Groenewegen, director of business development at Driessen-Zodiac Aerospace, points out, airlines want standardisation, but not too much. "There is surely a trend towards standardisation," he says. "Especially on single-aisle aircraft, standardisation is an opportunity to decrease cost and lead times. The 787 Dreamliner and the A350XWB already have a catalogue including a form of standardised galleys and stowages."

Driessen-Zodiac Aerospace is aiming to introduce its MaxFlex modular concept to wide-body aircraft as well, bringing the same flexibility as on single-aisle aircraft.



03-04. Airbus's forthcoming SPICE galley

the latest on SPICE

Airbus's SPICE galley concept is designed for use on aircraft from all manufacturers, but only the new ones. "It boils down to economics and retrofitting is just not considered interesting by airlines," explains Daniel Percy of Airbus's aircraft interiors marketing team. Although still under development as it approaches a launch decision in 2012, the galley already threatens to revolutionise standards. "We've proved the general principles," says Percy. "We're coming to an exciting time."

According to Percy, tests to date confirm that the concept has cleared the first hurdle – it doesn't take any longer to load onto the aircraft than the current trolley-based system, and may be faster. Airbus estimates that it takes 20 catering trolleys and 30 boxes to load a rear galley using today's systems. With SPICE, it will be 16 trolleys and 40 boxes, although ground crews will have to be retrained.

It's also faster on board, at least in economy class, where the serving of drinks is claimed to be much quicker. Testing has now turned to proving SPICE's performance in premium classes. Its architecture has been reconfigured to provide bigger and deeper preparation spaces, for instance by sliding oven doors that don't obstruct working surfaces.

SPICE also gets good marks for ease of use. "The clear feedback from crews is that the ergonomics are improved," says Percy. Of 44 airlines surveyed at various industry trade shows in 2010, 98% were said to rate the SPICE galley more highly than Atlas- and KSSU-based ones, with most of these citing ergonomic improvements rather than weight and space-saving advantages.

Next up, SPICE is undergoing a range of airline-specific evaluations. For instance, Airbus is experimenting with combining catering trolleys so that two can be manoeuvred at once. "That would mean half the number of movements," says Percy. Tests are currently being conducted on loading staff through sensors placed on the body, to measure the physical exertion involved.



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THERE WILL BE A DEMAND FOR STANDARDISED AND PRE-CERTIFIED GALLEYS, ECO-EFFICIENCY AND ECO-MEAL PREPARATION 99



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SILENCE IS GOLDEN Increasingly, galley designers rate peace and quiet as a worthwhile goal. At 2010's Aircraft Interiors Expo in Hamburg, Germany, the Muehlenberg group released its MI Pacific galley (nicknamed the Silent One) with a range of sound-absorbing features. These include dampened doors and drawers, spring-loaded locking of containers such as waste boxes and an advanced trolley fixation system. The modifications have been included in current production.

"Rattling in the galley during take-off, landing and unpleasant flight conditions has been eliminated," says Jakob Versemann, head of sales at Muehlenberg Interiors. "The principles can be deployed on any business-class, VIP or corporate jet galley."

Looking to the future, most galley-builders predict an exciting period of

innovation. "There will be a demand for standardised and pre-certified galleys, eco-efficiency and eco-meal preparation," forecasts Sell. "There will also be a call for social and lounge areas with full- or self-service bar units inspired by consumer market trends, or galley and bar unit combinations."

A recurring theme is the desire for standardisation in combination with flexibility. Airlines want to adjust the galley's layout during the lifetime of the aircraft without the high cost of retrofit – a need Driessen-Zodiac Aerospace is targeting with MaxFlex.

In the meantime nobody knows yet quite how much SPICE's box-based concept will affect the dominant Atlas standard favoured by some 80% of airlines (KLM and Cathay Pacific are among the few carriers that retain KSSU-standard galleys). "SPICE would

05. A TIMCO galley
06. Muehlenberg's MI Pacific galley (the Silent One)

offer many possibilities for an airline to customise the galley to its needs in a very efficient way – such as box modularity and plug and play," says an Airbus spokeswoman. However SPICE is not yet at the stage where Airbus has issued any requests for proposals from private manufacturers.

What is certain is that economies of scale are vital. Downward compatibility within airlines' existing fleets will be an overriding consideration in the forthcoming battle over which galley standard will dominate. **C**

CONTACTS

- www.airbus.com; www.altitude-ai.com;
- www.beaerospace.com;
- www.bucher-group.com;
- www.driessen.com; www.iacobucci.aero
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tastetest

Research has shed more light on how passengers' taste buds are affected in flight – but what can airlines do about it?

SIMON KNOTT, AIRLINE CATERING INTERNATIONAL

It goes without saying that airlines have a tough time of it serving tasty inflight food. There are the well-documented constraints of logistics, time, money, cabin equipment and space, crew training and health and safety issues. Perhaps less well-documented are the numerous and complex factors playing havoc with the passenger's ability to taste. The reduced atmospheric pressure and humidity, hypoxia (reduced oxygen intake), background noise, cosmic radiation and jet lag are all in the mix.

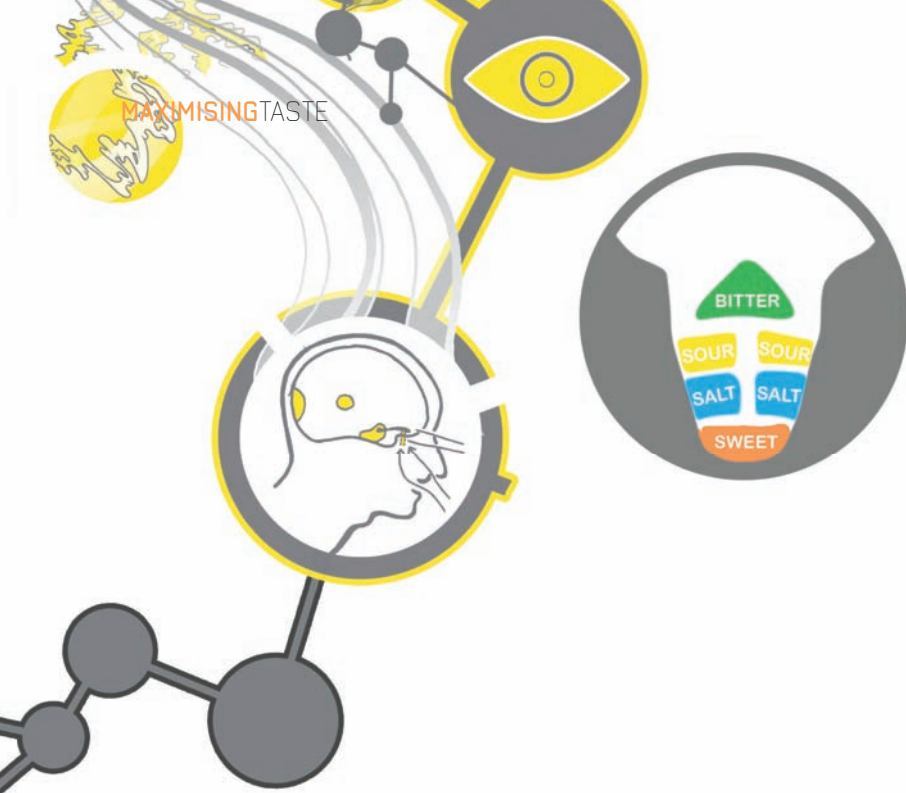
Lufthansa is one airline taking the problem very seriously, and has commissioned a study with the Fraunhofer Institute in Germany to look at odour and taste perception at varying

pressures. The study is ongoing, but some findings have already been put into practice. "We understand meals need extra salt to achieve the same flavour in the cabin, but just adding salt is not very healthy," says Sandra Kraft, spokesperson for Lufthansa. "Our chefs have found it's possible to use extra spices instead to change the flavour back to its original intensity."

AIR PRESSURE Another study from 2010 looked into the effects of pressure change on taste and odour. Also undertaken at Fraunhofer, it was subsequently published in the *Journal of Consumer Protection and Food Safety*. It was carried out in the front fuselage of an A310-200, itself located inside a vast







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AT LOW PRESSURE EVEN PARTICIPANTS WHO NORMALLY DISLIKED TOMATO JUICE FOUND IT ENJOYABLE – REPORTING A SWEETER, FRUITIER, CLEARER TOMATO TASTE 99

sublime vines

As with food, the cabin environment affects the flavour and bouquet of wines. Singapore Airlines employs no less than three sommeliers – two Masters of Wine and Steven Spurrier, a London-based authority and author on wine. With two tastings annually, the three whittle the best from up to 1,000 bottles of red and white wine, champagne and port.

In a further investment, to enable ground-based, cost-effective research, the airline also saw the requirement for a simulated aircraft cabin to study the changed flavours of food and wine.

They found that the inflight conditions mean that more robust styles are required to compensate for the loss of flavour. However, tannins do become exaggerated, so a dry wine can taste particularly dry in the aircraft cabin.

In general, fruity, rounded wines are seen as most likely to tolerate the stresses of international travel.

metal tube where pressure, humidity and temperature could all be controlled. After being standardised, the taste panel was exposed to typical flight pressure changes and presented with meal and beverage samples. Tomato soup and bread rolls had varying levels of salt; main meals had varying amounts of salt, sugar, spice and herbs; and desserts varied in sweetness.

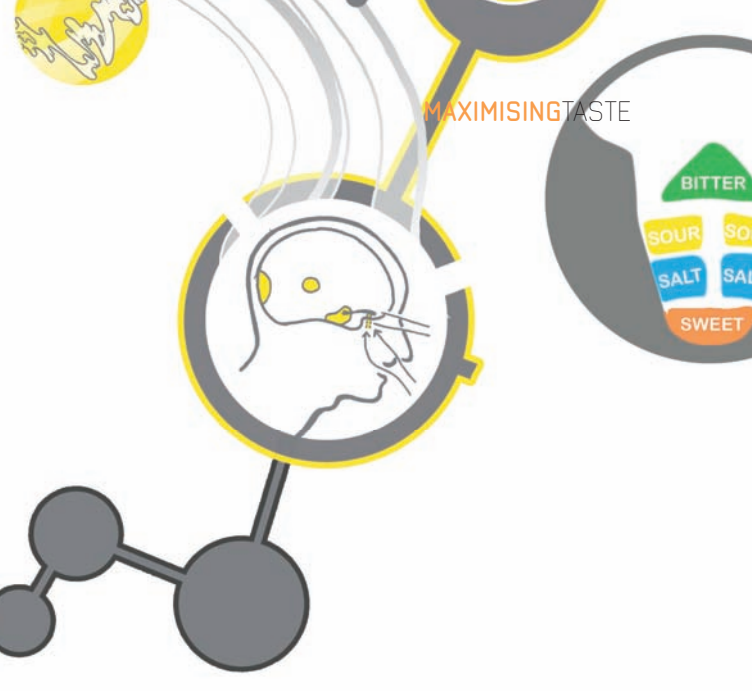
The soup and bread were preferred with a salt increase of 15-30%. Reactions to the main meals were more complex. General findings suggest spicy foods retain their flavour but milder dishes need extra salt and herbs to maintain acceptability. Acidity tends to become more intense at low pressure and therefore needs reducing, while chilli heat remains down to personal

preference and is unaffected by pressure change. Desserts made to the original recipe were perceived as sour, stale and lacking flavour, while the sweetened recipe was regarded as 'pleasantly sweet with an intense fruitiness'.

Beverage tests looked at tomato juice (an enigmatically popular inflight tittle), along with red and white wines of varying sweetness, fruit intensity and astringency. At low pressure even participants who normally disliked tomato juice found it enjoyable – reporting a sweeter, fruitier, clearer tomato taste.

Previous research (published in *Agricultural Food Chemistry* in 2004, *Food Chemistry* in 2006, and *Food Hydrocolloids* in 2008) suggests lowered pressure changes the texture of some





tackling humidity

There is at least one solution to low humidity for airlines that are willing to invest. CTT Systems' Cair system employs evaporative humidification, where cabin air is ducted through a moistened glass fibre pad. It is said to increase the RH by up to nearly 25% in first and business class, and by approximately 5% in economy. The enhanced performance in first and business occurs because they have lower RH than economy to start with, as less moisture is generated from the lower passenger density.

To date more than 25 airlines have installed CTT Systems products, including Lufthansa, which installed it in first class on its A380.

foods, so flavours that are normally masked are released and intensified, creating a new, appealing flavour. Light and fresh wines were shown to lose flavour, while intense and fruity wines maintained their fruitiness and in some cases even showed an increase. The loss of flavour in some wines made the alcohol content quite obtrusive.

Low cabin pressure has another effect – it can reduce available oxygen by 30%, enough to prompt mild hypoxia, symptoms of which include nausea and loss of appetite.

HUMIDITY Cabin humidity is also pertinent to the taste and flavour of food and drink. On land the relative humidity (RH) typically ranges between 50-60%, while at altitude it can plummet to

5-15%. Both taste and odour rely on the stimulation of nasal and oral receptors to initiate a nervous impulse. In physical terms these receptors rely on a viscous, water-based medium, which the taste and odour molecules have to dissolve into. The low humidity of cabin air results in dehydrated membranes, with a consequent reduction in receptor stimulation and a perceived loss of taste and flavour.

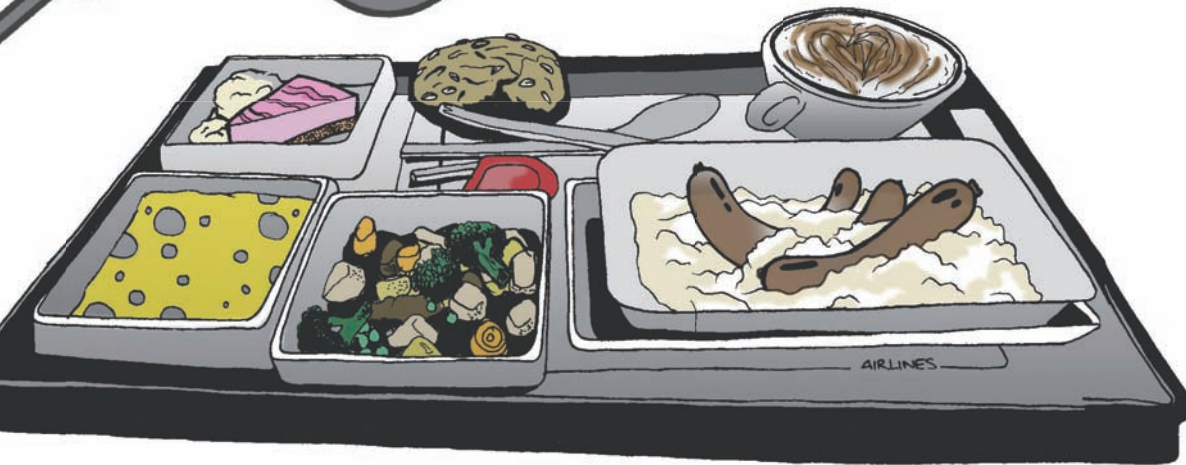
A small increase in cabin humidity does result from passengers breathing, with each passenger releasing about 100g of water per hour. However this moisture has little chance to permanently improve the overall cabin RH, as, during circulation, it comes into contact with the aircraft's freezing outer skin, quickly condenses and then freezes.

NOISE Recent research has even scrutinised the effect of noise on flavour and crunchiness. In 2010, a comprehensive study was conducted by a team from The School of Psychological Sciences at the UK's University of Manchester, together with Unilever's research and development department. They studied the effects of white noise on a taste panel. The few studies that had trodden this area previously had predominantly limited their research to food properties conveyed by sound, such as crispness.

In this study, however, 48 panellists were subjected, via headphones, to quiet white noise, loud white noise and silence. At the same time they were asked to rate food samples of varying sweetness and saltiness.

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SWEETNESS AND SALTINESS WERE PERCEIVED
AS LESS INTENSE WHEN TASTED ALONGSIDE
LOUD BACKGROUND NOISE 99



The results clearly showed that sweetness and saltiness were perceived as less intense when tasted alongside loud background noise. This effect was not demonstrated during quiet noise or silence. Conversely, crunchiness was perceived as increased when panellists were exposed to the loud noise. A third noted effect was the panellist's liking of the noise and the food tended to interact, such that the effect of the noise on the liking of the food correlated with the liking of the food itself.

The reasons for the loss of taste intensity during loud noise are still conjecture, but explanations put forward suggest that noise directly stimulates some taste function, as shown in previous research with rats. When played a 78dB continuous tone, 19% of the rats' olfactory neurons were activated. In contrast, other reports suggest loud noise may reduce the intensity of taste directly or by a psychological effect whereby the noise actually draws attention away from the sensation of taste to give a lower perceived intensity.

Heston's mission impossible?



Photo: Ian West/PA Wire

The issue of how the cabin affects taste buds became a topic of discussion for the general public (at least in the UK) in February 2011, when a mainstream TV channel aired a programme featuring the attempts of celebrity chef Heston Blumenthal to revolutionise British Airways (BA)'s inflight fare.

In the programme (part of a series rather pessimistically called *Heston's Mission Impossible*), Blumenthal worked with Steve Walpole, the airline's development chef at its long-haul catering supplier Gate Gourmet, and two cabin crew members.

Blumenthal was full of praise for Gate Gourmet's prep work on the ground, but wanted to bypass the 'double cooking' method whereby food is cooked on the ground and reheated on board. His first attempt involved cooking raw food in the cabin; his second solution was to serve cold food prepared on the ground.

Although Blumenthal produced some very interesting and beautiful-looking food that the passengers seemed to enjoy, both approaches involved too much inflight prep for the crew to deal with given the time and space restraints of onboard service. He also had the rather novel idea of making passengers use nasal douches before eating, an idea that may struggle to take off!

Famed for his scientific approach, Blumenthal was very interested in how the cabin affects taste. His own experiments confirmed that salt and sugar become harder to detect; but health concerns dictated that he wasn't allowed to increase the level of those. In the end he concentrated on accentuating umami (a savoury taste found in things like soy sauce, tomatoes and parmesan), which he found was unaffected by the cabin environment and doesn't have the same health issues as salt and sugar. He created a shepherd's pie using lots of umami-rich ingredients (no word on costings!), and the passenger feedback appeared favourable.

BA at least can't have been too unimpressed – Blumenthal has since been announced as part of the airline's Great Britons promotion. He will mentor a competition winner in creating a new inflight menu, to be served around the 2012 Olympic Games.

PLAN OF ATTACK Overall it appears that a two-pronged attack may be needed if airlines want to invest in improving the culinary experience on board. Some caterers are upping their game with improved recipes more tailored to the aircraft environment. However, should airlines be seeking to improve the cabin environment itself? An oxygen-enriched, more humid atmosphere might improve passengers' appetite, taste perception and overall well-being. However, with the cost of fuel still on its own take-off trajectory, improvements to the cabin environment are going to be hard won. ☺

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01

A range of induction ovens for airlines' premium cabins

fine dining



Induction ovens are Modular Galley Systems (MGS)'s answer to airlines' demand for ways to differentiate and improve the quality of food served in their cabins. In fact MGS – a wholly owned subsidiary of the Iacobucci HF Group – believes it is the only supplier of induction ovens for aircraft worldwide.

"In the more competitive premium traffic market, airlines are striving to increase the level of service on board, and consequently the satisfaction of their customers, by differentiating the food offering during both short- and long-haul flights," says Riccardo Palmeri, group marketing director at Iacobucci HF Electronics.

To fill the gap MGS, a innovation-driven German company, has developed an induction oven solution, the Multi Functional Unit (MFU). This can be used on both commercial aircraft and business jets. The company has won three Mercury Awards for its efforts.

MGS says the patented induction system offers a wide range of advantages compared with conventional ovens. "It's safer, as none of the external parts are hot during operation; it offers a quicker re-heating service; and allows airlines to prepare fresh meals like in a five-star restaurant," says Palmeri.

The re-heating tray enables airlines to warm up pre-cooked meals in standard aluminium foils in only 12 minutes. In addition, the MFU can automatically detect and identify trays and pre-select a desired heating programme.

The oven has already been installed on several corporate jets and commercial aircraft. "They appreciated the improved quality and variety of food that resulted from the combination (in the AAD4 series) of induction cooking with the humidity of steam, which conserves the food's vitamins, taste and aroma, creating a real gourmet experience for passengers," says Palmeri.



02



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Various slide-in modules have been developed to enable the preparation of fresh food on board. The numerous accessories make it suitable for preparing various foods – including roasting fish and meat, frying eggs, toasting bread, steaming vegetables, cooking pasta and rice or simply reheating prepared foods.

“Moreover a smart programming system with automatic processing, coupled with innovative heating technology and special attention to materials, ensures simple, convenient and safe handling for the operator, while a filter inside the steam exhauster absorbs any grease and odours,” says Palmeri.

RECENT UPGRADES

To increase market penetration MGS has also developed a space-saving ARINC version of the MFU. This provides the same features as the AAD4 series, but in a compact version,

group dynamics

MGS is just one part of the Iacobucci HF Group, which is rapidly expanding its scope within the aircraft interiors industry. The group, headquartered in Ferentino, Italy, incorporates Iacobucci HF Electronics; Iacobucci ATS – Aircraft Trolley System; Iacobucci MK (based in Lecce, Italy); as well as German subsidiary MGS, and is supported by 17 certified repair stations around the world.

With over 30 years of experience, the group’s traditional focus has been the design, manufacture and supply of trolleys and galley inserts such as espresso and coffee makers, water heaters, trash compactors and ovens for commercial and business aviation.

However, the group recently created two new business units – one that is dedicated to the production of VIP seats for the business aviation sector, and the other to develop innovative solutions for non-aeronautical markets.

Iacobucci HF Group boasts experienced Catia industrial designers, highly skilled engineers and qualified craftsmen. Its dedication to quality, reliability and customer support have helped the group to win many elite airlines and private jet operators as loyal customers.

- 01. The MFU is designed to enable greater flexibility in onboard cooking
- 02. A RAD4-model MFU
- 03. The MFU can be used to warm or reheat food
- 04-05. The MFU uses induction technology for steam cooking – great for rice and vegetables



06



07



08


06-10. Various inserts are available for cooking everything from toast to steak



09

meeting all the requirements of ARINC's 810 and 812 standards.

MGS's engineers are always at work developing new galley inserts and improving the company's existing range. One recent innovation was the development of a central control unit for the ovens, which enables communication-based applications such as power and content management, remote control and central maintenance. MGS says this functionality is essential for the ovens' integration with the upcoming Boeing 787 and A350 platforms.

The company has also developed an additional version of the oven featuring an updated, modern appearance. It includes a new display, Piezzo switches and a stainless steel interior. 



10

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01

The attention paid to making its new Hybrite line look great has won design recognition for Driessen-Zodiac Aerospace

grand designs

Earlier this year, Driessen-Zodiac Aerospace's trolleys scooped two awards from the renowned red dot jury. As well as an honourable mention for its Hybrite line, the company's classic lightweight trolley was granted a red dot award for product design following its rebranding by German company BordBar – which sells ex-airline trolleys for domestic use by the general public.

The Hybrite trolley was praised for its stylish appearance and attention to detail – for example, the curves and the flow line of the front panel and top drawer. The Hybrite line also received a lot of attention this year at the ITCA show (held on 15-17 February in Nice, France) and the Aircraft Interiors Expo (held on 5-7 April in Hamburg, Germany).

At these shows Driessen displayed four attractively styled Hybrite trolleys to highlight various benefits of the range. All the trolleys within the Hybrite line can be customised in this way, with any image or pattern of the airline's choosing.

One of the trolleys on display was swathed in a luxurious black snakeskin print. "This was to demonstrate the style and cosmopolitan elegance of the trolley, achieved through its curved design and composite parts," says Wampie Kegel, corporate communication manager at Driessen.

Another, decorated with a beach scene, represents the trolley's ergonomic benefits – which include an ergonomic push bar, easy-grip corners and a new wheel design for easy and stable manoeuvring. The new brake system acts on all four swivel castors (or on either two or four swivel castors for the half-size trolley).

A third trolley with a Mondrian-inspired design represents the product's design credentials, and in particular, its flexibility in terms of design options, order quantities, colours and the models on offer. The range includes a full-size meal trolley, half-size bar trolley, waste trolley and air through, all of which are available in ATLAS and ACE configurations.



02

The fourth features an evolution theme – echoing how the company used engineering capabilities and experience gained from designing full-composite trolleys to create the new range. Hybrite is a hybrid trolley, combining both aluminium and composite materials. Weight starts from 10kg for a half-size bar trolley and from 15kg for a full-size meal trolley, dependent on customisation.

MAINTENANCE MATTERS

The Hybrite trolley line is also designed to be extremely durable and easy to maintain. “We believe in long-term solutions,” says Kegel. “Our experience in the industry has taught us that maintenance will be required as trolleys are not always handled smoothly, and often abused in the logistic and cleaning process.”

As part of its efforts to make the trolley practical and long lasting, Driessen paid a lot of attention to the finish, and to creating a flush surface. “A smooth surface is more hygienic, easier to clean, and also prevents damage,” says Kegel. “This is particularly



03

joining the dots

The red dot awards are an internationally recognised accolade. There are prize categories for product design, design agencies, and design concepts. Winning products are presented in the red dot design museum on the premises of the historical Zollverein Coal Mine Industrial Complex in Essen, Germany.

The red dot design award has attracted more than 14,000 submissions from 61 countries this year. Previous winners include companies such as Siemens in 1995, Apple Computers in 2001, BMW Group in 2007, the Bose Design Center in 2008 and Opel in 2008 and 2010.

01-03. Various styles applied to Hybrite trolleys

important in the areas that are likely to cause damage or injuries to the cabin interior, crew and passengers.”

To reduce maintenance time and the number of spares required, Driessen has introduced complete interchangeability of major components throughout the line. The line has more than half the number of parts of Driessen’s existing model.

However, in promoting the trolley line, not much attention has been given to the quality, durability and maintainability of the trolley. “These are renowned characteristics of Driessen products,” says Michiel Maris, director of sales and marketing for galley equipment at Driessen. “We felt it was time to show that our new Hybrite trolley line is also stylish and can be placed in the most modern cabin interior.”



04. The Mondrian-inspired decor

reddot design award
honourable mention 2011



tried and tested

Hybrite is fully certified and ready to use for inflight catering. To get to this point, the trolley endured rigorous testing that Driessen says went far beyond all airworthiness and major airframe manufacturers’ requirements and approval with EASA or FAA certification. The trolleys are designed to withstand even severe abuse in day-to-day operations, and have undergone field and lab tests.

First up was static testing, which assesses the trolley’s strength when faced with severe crash situations. “In these tests forces equal to almost 1,000kg of pressure are applied,” says Michiel Maris, director of sales and marketing for galley equipment at Driessen. “These tests specifically show the strength of the structure in combination with its lock, hinges and doors. The Hybrite trolleys passed with flying colours.”

Then there was the drop test, which scrutinises the strength of the trolley’s base and base part. “To do this, a fully loaded trolley (weighing 100kg) is dropped from a height of 80cm,” says Maris. “Tests show that the Hybrite base, brake mechanism and castors remain functioning and show no visible or mechanical damage.”

The durability test, performed with a fully loaded trolley, is used primarily to test the trolley’s superstructure and bonded joints for fatigue strength. “The Hybrite trolley travelled more than 140km in the test, going over almost 30,000 bumps without having any impact other than the normal wear and tear,” says Maris.

The final hurdle is wash testing. “The Hybrite trolleys endured more than 720 wash cycles – which is equivalent to at least two years of daily washing,” says Maris.

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01

vital logistics

LSG Sky Chefs is enabling airlines to outsource every aspect of catering

 LSG Sky Chefs says it can save airlines up to 15% in equipment and logistics costs through a newly devised 4PL logistics model. The company, which serves over 300 airlines, provides at least half of its customers with logistic services beyond those of a traditional airline caterer. These services include equipment forecasting, transportation, warehouse management and flexible invoicing. The company has had an inflight equipment and logistics arm, LSG Sky Chefs Catering Logistics (LCL), since 1999. However, with the launch in 2008 of SkylogistiX, a joint venture with logistics expert Kuehne + Nagel, the company began to offer full-service equipment and logistics solutions.

Alexander Kolf, managing director of SkylogistiX, says that the company can provide modular inflight services to suit virtually any airline. "We can provide a basic offering of warehousing and delivery, right up to complete outsourcing models including procurement, asset ownership, material planning, inventory management, scheduling and so on," he says. "The more services that we take on, the greater the savings we can deliver."

Transferring responsibility for equipment and logistics creates challenges but can also offer great opportunities for both parties. For the inflight services operator, running multiple airline operations through a global network of manufacturers and suppliers means benefiting from economies of scale. For an airline, LSG Sky Chefs says it means being able to focus on the core business of transporting passengers knowing that the inflight service operations will run according to plan.

GLOBAL MARKET

Obviously one of the main challenges is ensuring consistent communication between such large organisations, which operate across international borders on a constant basis. If not managed correctly, problems can occur, for example when integrating IT systems for real-time monitoring, and control of equipment, flight delays, ad-hoc requirements and so on.

"We have a vast infrastructure in place to support our customers," continues Kolf. "With more than 400 warehouses worldwide and a reliable network to serve them, we can ensure the right level of stock is situated where it's

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02

needed, to be called on at just the right time. This cuts down on unnecessary stock piling of inventory, something that offers considerable savings over time. Naturally this isn't possible without proven forecasting and material planning systems, and an effective inventory management and reduction process."

This is where the company's own integrated IT solution comes into play. "SkylogistiX maintains its own dedicated software package, tailored to cover airline requirements in the planning and operational management of the inflight supply chain, including sophisticated forecasting modules and standard interfaces to the airline's own IT systems," says Kolf. "This, along with a clear airline – supplier management strategy, is vital in determining the optimal equipment management and logistic needs of an airline."

LSG Sky Chefs can call on experts at every level of the asset management supply chain, either internally or through a partner. Its equipment management and development team, for example, works hand in hand with suppliers to limit product-related risks and maximise the lifecycle of a product. The result of this has been a number of acclaimed products, such as a glass rack designed to reduce glass breakage by 70%, and the Quantum trolley, jointly developed by LSG Sky Chefs and Norduyn to reduce unnecessary resources and fuel burn.

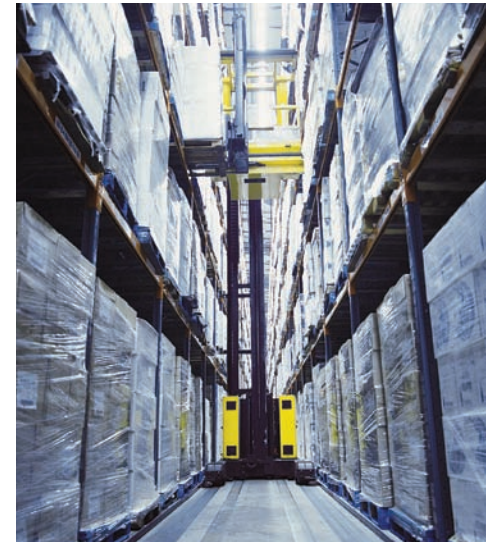
Each function at the company is considered an equally important part in the supply chain process. For example, the development team is supported by a quality management unit, which reviews and audits suppliers regularly to get a full understanding of their capabilities in terms of production methodologies, new technologies, quality and reliability.

However, this is not the only thing that is important according to Dirk Mulzer, managing director of LSG Sky Chefs' inflight equipment division. "As we are heading towards more and more sustainable solutions for our customers, we expect a similar approach from our suppliers," he says. "We believe that it's possible to find a happy medium where products are effective, offer savings over time and are better for the environment. Something that is supported at executive level all the way to the shop floor."

TRACK RECORD

Outsourcing the equipment and logistics operations to an inflight service provider may seem like a daunting proposition, but to date no airline has taken back this responsibility once it has handed it over to LSG Sky Chefs.

"Customers might think, am I going to lose sleep over making a decision like this, but in reality it's quite the opposite" says Mulzer. "They soon find out that it actually gives them peace of mind. They no longer have to worry



03

- 01. The Quantum trolley
- 02. One of SkylogistiX's services is transporting stock
- 03. LSG Sky Chefs has more than 400 warehouses around the world

about sourcing goods, monitoring them, or any services or repairs. We can take care of a product throughout its entire lifecycle at every stage of the supply chain."

Mulzer says that because LSG Sky Chefs does this on such a large scale, it can also provide large-scale savings. "Take procurement for example," he continues. "Because we have a truly global network, we can source goods from virtually anywhere in the world and transport them to their destination with the most effective mode of transport – whether that be air, ground or sea freight. What's more, our international freight experts ensure that all documentation complies with any international or local customs regulations. That process in itself offers great savings in terms of both time and resources for our airline customers."

Of course, some may ask why a company such as LSG Sky Chefs is expanding from the traditional role of an airline caterer. But for Mulzer the answer is simple. "We saw a need from our customers for this type of service and we identified the best way to solve it," he says. "The skills, knowledge and experience that Kuehne + Nagel has brought to our organisation are key factors in helping us grow our business when the industry has been in decline. Once upon a time we were caterers. Now, we're the next generation of inflight service providers." C



01



02



- 01. A steam oven, part of Sell's new ip range, which will be available from early 2012
- 02. The new ip coffeemaker

Sell assesses the trends dominating the galley industry today and tomorrow

fashionforward

The first galley ever delivered by Sell was for a Lufthansa Super Constellation back in 1955. From those early days, many obstacles had to be overcome to guarantee the optimal use of the galley in the aircraft. A food supply chain had to be established, as well as specially designed new galley equipment that would meet the needs and requirements of the aviation industry.

"The airlines' approach shifted from pure practicality to a view that also focused on easier operation, style and comfort," says Jürgen Just, vice president of marketing and sales at Sell. "Elliptical and curved forms, as well as the integration of lighting configurations, are only two examples of the increasing customisation in this sector. Airlines today want to integrate their corporate image and brand values into the design and styling of the galley."

Customisation options for Sell's galleys include the implementation of illuminated logos, invisible revolving catches installed behind the trolley doors, or the use of roller blinds with logo applications.

Aesthetics and ergonomics are also becoming more important with galley inserts. "Airlines and aircraft manufacturers are focusing on galley inserts that embody the fulfilment of new technologies and requirements," says Just. "This, coupled with an advanced and classic product design that harmonises with the existing cabin interior, makes operations easier for the crew."

The challenge, according to Sell, is to combine form and function – delivering an attractive and elegant outer appearance while also incorporating the increased functionalities required by airlines today.

"There is a clear focus on weight for modern galley inserts, which naturally leads to savings in fuel costs for operators," says Just. "Additionally, sophisticated closing mechanisms, low touch temperatures, and fast operating cycles all increase the ease of use for cabin crew."


Sell has endeavoured to incorporate these attributes into products ranging from the Innovative Bar Unit concept to its latest range of galley inserts, the ip series.

"To address safety requirements, over-heat protection is a given and applies to insulated faucets, doors and serving pots – maximising safety within the framework of the improved styling," says Just.

Meanwhile, Sell believes the next generation of galley inserts need to not only comply with the newer ARINC standard, but also with the currently predominant ATLAS standard, to allow for downward compatibility within airlines' existing fleets.

Since the inception of commercial aircraft galleys, the steadily changing needs of airline customers and stringent industry requirements have continually set new challenges for aircraft interior suppliers. So what challenges might the future hold?

Just predicts demand for standardised and pre-certified galleys, eco efficiency, eco meal preparation, social and lounge areas with full- or self-service bar units, galley and bar unit combinations – and more.

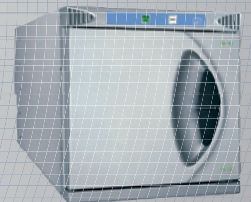
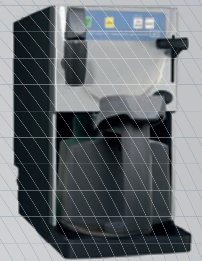
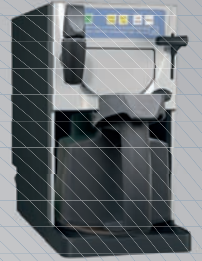
"The industry will not stand still – quite the contrary," says Just. "We are therefore looking ahead in anticipation of innovative and challenging times in the aircraft interiors industry, and Sell is uniquely positioned to meet the requirements of our customers for these challenging times ahead." 

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01. A full-size EcoLite cart
02. A half-size version

Two years on, the EcoLite trolley is gathering great feedback from customers

Diethelm Keller Aviation (DKA) introduced its all-aluminium EcoLite meal carts to the aviation market in April 2009. In just over two years the model has garnered airline clients from Europe, South America and the Asia Pacific region.

"These airlines, with great foresight and commitment to help conserve the environment, have helped to prove that EcoLite is a practical and effective design suited for the most demanding airlines," says Gabriel Ng, regional sales manager (Asia) for DKA. "EcoLite not only offers big weight savings, saving fuel and reducing airlines' carbon footprints; hidden benefits include its high certified gross weight, durability, low malfunction rate, great thermal performance, improved ergonomics, ease of maintenance and modern appearance."

DKA has already sold thousands of EcoLite meal carts as rotables and ship-set equipment, and the feedback it has obtained from EcoLite users had been very encouraging.

For example, one customer, based in China, bought the 16.8kg full-size version in early 2010. "The cabin crew loved EcoLite's lightness and manoeuvrability," says Ng. "Compared to old-generation full-size carts that weigh more than 20kg each, this customer can save between US\$130-360 (£79.61-220.48) worth of fuel per annum for every kilogram reduced on board."


According to DKA's calculations, this means that for every 1,000 full-size carts that were changed to EcoLite, the customer will save at

least US\$416,000 (£254,829) per annum, on weight-fuel savings alone. "This customer also estimated that the cost of investing in EcoLite can be fully recovered purely from fuel savings within two years of implementation," says Ng.

DKA says feedback has also vindicated the 'push to close' door lock feature, incorporated to make the doors easy to open and close. DKA believes this also prolongs the trolley's working life. "As the meal carts can be used for more than seven years when properly maintained, the recurring savings from fuel can contribute further to the airline's bottom line," says Ng.

There was also positive feedback regarding ease of maintenance. "This means fewer spare parts are kept as stock," says Ng. "Also, a faster repair turnaround times ensure that time and resources are optimised with little wastage."

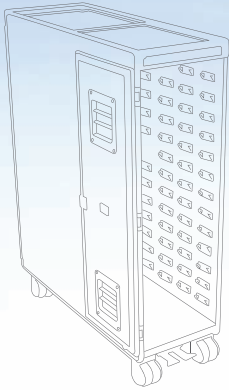
Meanwhile, DKA says several of its European customers have commented favourably about the way EcoLite can be customised to suit their operational needs. Extra flip handles, detachable table tops, twin doors on half-size carts and a choice of lightweight castors are just some of the choices DKA offers.

"We are entering an era of consistently high fuel and energy prices," says Ng. "There should be more countries gradually adopting a carbon tax approach to reduce pollution. Airlines are becoming more determined to invest wisely in proven, reliable and lightweight equipment that enhances service levels, while reducing heavy costs to both the earth and the airline." 

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01



A new fully automatic trolley dispenses drinks in the cabin at the press of a button

liquidasset

The airline industry has waited a long time for an automated drinks dispenser for the aircraft cabin, and this wait has come to an end with the launch of Sky-Tender, a fully automatic drinks trolley that prepares hot and cold drinks at the press of a button.

By mixing together concentrated syrups and water, it provides up to 30 different drinks such as fruit juices, soft drinks and mixed drinks. Coffee, tea, beer and wine can also be offered. Bottles and cans inside the aircraft cabin become obsolete, as the product uses a bag-in-box system.

The German companies Air-Eltec Luftfahrtelektrik and SkyMax joined forces to develop the necessary technology and make it ready for market use. Sky-Tender can also be integrated into existing lightweight trolleys.

The principle of packaging drink in bags has been around for hundreds of years. Sky-Tender uses the bag-in-box system – which it says is environmentally friendly and cost-efficient – with the aim of improving service in the

aircraft cabin. All syrups and drinks are stored in a wafer-thin plastic bag, which is then encased in a cardboard box. At the press of a button, concentrated syrups (available in various flavours) are mixed with water in an average ratio of 1:10. If applicable, carbonic acid is added to the mixture. Hot and cold water is stored in an insulated container.

INTUITIVE OPERATION

To improve handing for the aircraft's cabin crew, a panel displays all available drinks, with their logos. These can be selected easily by tapping the touchscreen. SkyMax says this means providing the crew with instructions or even training is not necessary. Using the system also means that flight attendants no longer need to handle hot water, as coffee and tea are created automatically.

Sky-Tender is designed to eliminate the need to make several trips to the kitchen, and save an enormous amount of time. Other aids to service include automatic cup detection; and new pump technology that makes it

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- 01-02. Sky-Tender integrates a drinks dispenser into a standard aircraft trolley
- 03. Inflight service testing



02



possible to tap the same drink from both sides of the trolley at the same time.

Empty bottles and cans no longer have to be collected and disposed of – only empty drinks bags remain, which take up comparatively less space and for which SkyMax says a waste compactor is not needed.

Another key consideration in developing Sky-Tender was making it easy to load. The side panels of the tap platform can be pushed

down to give access to the compartments for the refill boxes – enabling the empty bags to be removed and new ones slipped in. SkyMax says simple connections ensure that the carbonic acid cartouches can be exchanged without any problems. In addition, the trolley's top offers space for storing sweets, nuts or other products.


As already noted, Sky-Tender enables passengers to choose from up to 30 different juices, soft drinks and mixed drinks. Freshly filled, the trolley produces more than 220 drinks. Other benefits include the fact that flight attendants can adjust the carbon dioxide content of drinks to suit the cruising altitude and cabin pressure.

Behind the outer panels hides intelligent technology. Twenty small membrane pumps supply ten compartments. "We have created a system with redundancy," explains Oliver Kloth, managing director of SkyMax. "Since each compartment is connected to two pumps, when one pump fails, the crew can continue to serve drinks."

WEIGHT AND SPACE

The concept is also designed to offer cost advantages for airlines. Firstly, any reduction in waste helps to reduce disposal fees. In addition, SkyMax says Sky-Tender saves 20-60kg of weight per flight, depending on the flight profile and aircraft type.

"This lowers both kerosene consumption and CO₂ emissions – and is also relevant for caterers, who need just a tenth of the storage area by refraining from using cans and bottles," says Kloth. "Because the system uses highly concentrated syrup instead of voluminous ready-made drinks, nine out of ten lorry runs are no longer required."

SkyMax offers a leasing programme, which is tailor-made for the product cycle, meaning large investment planning is obsolete. The company also handles technical service and the repair of defective trolleys. Its close cooperation with suppliers means that SkyMax is confident it can continually supply all the system's components (such as concentrates and cartouches) in the long term. 



03



01



02

John Davis's unconventional approach has made his meal accompaniment business a success

wildsides

➤ Ten years ago John Davis was running a four-star hotel and trying to find a solution to the growing cost of staffing his kitchens for large-scale banqueting. He started to look for a good supplier of accompaniments but couldn't find the standard he wanted.

Fortuitously, Davis met business partner Clive Barker, a chef who had trained at London's Westminster Kingsway College and worked internationally. The two men formed BD Foods, to provide food accompaniments produced by chefs using good quality, fresh ingredients. Any plans the partners had to build the business slowly were shelved when a stroke of good fortune brought in an order they couldn't refuse and kickstarted their long-term relationship with the airline industry.

"Our salad dressings just happened to be at a banquet at the Russell Hotel in London, where someone from British Airways was attending," says Davis. "He asked the manager where they'd got it from, rang me up and said how delicious it was and that he was looking

for 10-15ml portion, single-serve bottles for his first-class passengers. At the time we knew nothing about food manufacturing on a large scale but said that yes, we could do it."

Davis's unorthodox approach leapt into action. "I rang my sister, who is a doctor, and she gave me a medical vial. I then got a wine cork and sanded it down, designed a label, which I ink-jetted myself, and moulded the protection plastic seal on with a hair dryer," he says. "BA loved them."

The next thing they knew, Davis and Barker had an order for 50,000 bottles. "I said to them, 'Great, we'll schedule that over the next two or three months' and they said, 'No - that's how many we use a week.' Our company was only three-months old at the time."

Undeterred the two men worked 22 hours a day, camping in sleeping bags on the factory floor, and within six weeks they had fully automated the bottle production. Ten years on and BD Foods now supplies 12 international airlines with orders from as little as 50 units a week right up to 50,000. Products are delivered

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in PET bottles, glasses with cork or screw tops, sachets and dip pots. Airlines can choose from over 32 flavours, sourced where possible from the UK.

"When a chef only has oils and vinaigrettes it fetters their menu, but we can give them flexibility – so they might have a prawn cocktail with our thousand island dressing or a Caesar salad dressing," says Davis.

KNOW YOUR CUSTOMER

The slick operation now in place is very different from that first order for BA. "To succeed with the airline business you have to be sympathetic to the way they operate," says Davis. "If an airline is producing say 75,000 meals a day, you have to be prepared to receive a fax overnight with an order to supply tens of thousands of products that day."

There's no regular order number coming through. "For numbers of that size, it's impossible for the airlines to store the products, and the demand fluctuates daily – to avoid wastage they try and balance the meals with who is going on the aircraft, so it's impossible to order in advance," says Davis.




- 01. BD Foods' pesto
- 02. The company also offers sweet condiments such as this fruit compote

"So you have to be very quick to react and you have to know the menu cycles of the airlines you are catering for as well."

BD Foods delivers the products in its own refrigerated transport and it's not unknown for them to make two trips a day. "When you're preparing 75,000 meals a day you're going to forget something, and they do, so you have to

be prepared to cater for this and to do so willingly, which we do," says Davis.

Perhaps it's that can-do attitude coupled with consistent investment in new product development that has turned the business into a success story with an annual turnover of £5 million. The days of sleeping bags are very much confined to the history of BD Foods. 

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15ml Voyager bottles





No-calorie beverages that target jet lag to keep crew and passengers refreshed

lightrelief

In 2009, over 769 million passengers travelled by airline to, from and within the USA – not to mention the flight attendants and pilots who worked those flights. Aside from the most commonly reported jet lag symptoms such as dehydration, insomnia and catching colds from other passengers, less notable symptoms can include headache, anxiety, stress, fatigue, irritability, light-headedness, digestive problems and even perspiration. A study by Upjohn showed 94% of long-haul travellers experience jet lag; and a 1994 study by Miers Laboratories showed that 96% of flight attendants suffer from it.

With those figures in mind, Jetway, based in Kailua, Hawaii, USA, launched Jet Lag Beverages – ready-to-drink beverages that promise to relieve or prevent common jet lag symptoms in both passengers and the inflight personnel serving them.

“Keeping your onboard crew healthy and focused are two things that are easily overlooked but are extremely important for

your staff to be able to provide high-quality customer service,” says Andrea Gall-Krasnick, president and owner of Jetway. “Passengers are very quick to notice when flight attendants seem irritable or appear to have a short attention span, say, when they forget your cocktail. Flight attendants travel for a living and deal with hundreds of people every day; it can be tough to stay cool, calm and collected all the time.”

HOW IT WORKS

Dehydration can be caused by dry air circulating in the aircraft cabin throughout the flight. Jetway says mild dehydration can contribute to feelings of malaise, headache and eye and nasal discomfort, which in turn acts as a catalyst for catching and transferring cold and flu viruses. To stay hydrated, it is important to drink plenty of water, which each Jet Lag Beverage handily provides as its base ingredient.

Starting with water and iced teas as a base for the functional ingredients, Jetway then

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made a list of jet lag symptoms and cross-referenced it to a list of vitamins and minerals shown to relieve those symptoms. "The result was a proprietary blend of five vitamins, six minerals and three herbs with functions directly correlated to relieving or preventing specific jet lag symptoms," says Gall-Krasnick. "The theory is, if you drink a Jet Lag Beverage before and/or during the trip, it will help your body to function properly and prevent symptoms; if you drink it after you arrive at your destination, it will help relieve the symptoms you've acquired."


Jet Lag Beverages contain no calories and no caffeine. "When I spoke with airline representatives, I was told our beverages should have no calories or as few calories as possible; otherwise the flight attendants were not likely to drink more than one beverage during a shift," says Gall-Krasnick. "I took that advice very seriously."

In addition to helping onboard staff stay healthy and free from jet lag during long-haul flights, Jetway says the beverages can increase inflight sales revenue for airlines. "Passengers drinking wine, beer or cocktails during a flight can finish up with a Jet Lag

Beverage, which should help counteract the effects of alcohol and dehydration," suggests Gall-Krasnick.

BRANDING OPPORTUNITIES

Jetway currently offers two brands of Jet Lag Water – Honolulu and San Francisco; and two brands of Jet Lag Iced Tea – Beijing and Tokyo. The concept bases brand names on iconic destinations from around the world and follows through using flavour profiles based on those places' indigenous crops. For example, Beijing is based on China's black tea and flavoured with apples and peaches, two of China's most popular domestic crops.

This concept has the potential to fit very well with airline promotions. Jetway is eager to work with airlines to launch new beverages for any destinations airlines are planning to expand service to. "We would be delighted to sit down with airline representatives and collaborate on the next brand/destination Jetway launches," says Gall-Krasnick. "From flavour profiles to graphics, co-branding represents a great promotional opportunity for the airline and then helps create onboard sales afterwards." 



HONOLULU - JET LAG WATER
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01. Some of the wines offered by Ratcliffe & Brown Wines & Spirits

Replacing glass bottles with MLPET could save weight, space and energy

lightenup

“Airlines could save 35-45% of the weight currently involved in flying wine and gain up to 20% space in a bar cart without penalty, by a simple change from glass to multilayer polyethylene terephthalate (MLPET) bottles,” says David Ratcliffe, joint managing director of Ratcliffe & Brown Wines & Spirits, a UK-based wine merchant that specialises in supplying the travel catering industry.

“MLPET is an immensely strong, inert, food-grade polymer widely used in the food and drinks industry,” explains Ratcliffe. “It is approved by international regulatory bodies for use with food and alcohol, is ‘taint’ free and extremely safe.”

MLPET bottles are recyclable and feature a layer of nylon sandwiched between two PET layers. The company says this makes it five times more effective at blocking oxygen transmission through the wall of the bottle than standard monolayer PET bottles, greatly lengthening the shelf life of the wines inside. “Also, because MLPET bottles have a much thinner wall section than glass, they take up 20% less space in a bar box. They are also virtually unbreakable, a very important consideration with onboard safety and security in mind,” says Ratcliffe. “As a result of these attributes, smaller, lighter cardboard cases can be used and because the bottles are so robust, the cases don’t require dividers, saving trees, energy and costs.”

Weight and space savings can also be beneficial throughout the product cycle. “A typical

nine-litre case of MLPET bottles in a lightweight carton with no dividers weighs around 11kg, whereas a comparable case of glass bottles in larger, heavier cartons plus dividers weighs approximately 21kg,” says Ratcliffe. “The reduction in weight means that 24 more full cases of 12 x 75cl wine bottles can be stacked on a standard pallet [624 more cases in a 40ft trailer], for less weight and fewer deliveries.”

The company says that because of the reduced wall thickness, when filled, the new 1-litre MLPET wine bottle is almost identical in appearance to a 75cl glass bottle and actually weighs less, even though it carries 33% more wine. Additionally, a new range of deep-skirted tamper-evident printable screw caps made from high-density polyethylene is now available for all sizes, making all the company’s MLPET bottles and caps 100% recyclable.

Ratcliffe & Brown currently offers 187ml, 75cl and 100cl MLPET bottles, filled with a wide range of high-quality wines, from around the world, specially selected for their rich fruit characters and suitability for enjoyment in the rarefied atmosphere of a pressurised airline cabin.

“MLPET bottles look just like glass but are incredibly lightweight, compact, virtually unbreakable and completely recyclable,” says Ratcliffe. “I think it is fair to say that if glass bottles had just been discovered and were being promoted as the new packaging for airline wines, they would never have got off the ground!”

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Specialists in supplying exciting, fruit-driven wines
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WHO CHOOSES SWISS'S INFLIGHT WINES? Chandra Kurt consults with Swiss's inflight product team and myself in choosing the wines. Kurt is a Swiss expert who has published various books and articles on wine. Within the intercontinental inflight product development team, I am the culinary expert for the food and beverages served on Swiss's intercontinental fleet. My background is a culinary apprenticeship and several years in the hotel and restaurant industry. I joined Swiss directly after my hotel management exams.

HOW DOES THE SELECTION PROCESS WORK? Most of the wines are sourced by a specialised wine supplier who receives input from our Kurt as well as from the inflight product department. In general there are no preferred wine suppliers, but the wines need to reflect the positioning of the different classes as well as to fit our brand. The shortlisted wines are selected during a blind wine tasting. We do our own research, get input from our wine experts and hire a company to do a presentation of multiple choices.

WHAT DO YOU LOOK FOR IN A WINE THAT WILL BE SERVED IN THE CABIN? Acidity and tannins are particularly strong at high altitude. This makes young and unripe heavy wines especially unattractive on board. It is a kind of disappointing to have a wonderful Bordeaux on board but because of the high amount of tannin it doesn't compare to tasting it elsewhere.

IS IT IMPORTANT TO CHOOSE SWISS WINES? Besides chocolate and cheese, Switzerland has a long but internationally not very well-known tradition in wine production. As an ambassador for Switzerland, Swiss wines are an inherent part of the wine programme on board. With our Swiss Taste of Switzerland inflight food and drink programme, which was launched in 2002, we highlight the diversity of Switzerland's regions through their culinary specialities and local produce. With each canton we offer our passengers in intercontinental first and business a white and a red wine from the promoted region. But of course it is not just Swiss wines on our wine list, we have the French classics as well as a delight from the old and new world (i.e. Spain, Italy, USA, South America, Australia or South Africa). Besides these wines we always offer a specially selected Swiss Discovery Wine, which isn't mentioned on the menu card and promoted by our cabin crews.

WHAT WINES DOES SWISS OFFER ON BOARD? Most of the wines in intercontinental first and business are changed every three months. On European flights the wine selection changes less frequently. In first class we choose seven wines, a champagne, a port wine and a sweet wine. In long-haul business class we choose six wines, a champagne and a port wine. In short-haul business class we choose four wines, a champagne and a port wine. In economy we serve two wines and a sparkling wine. All wines are free of charge in any class. Currently in first class we have two high-quality Swiss wines, an Alain Geoffroy



Peter Schneider explains how Swiss International Airlines chooses the wines it serves on board



Chablis Premier Cru, a Château Smith Haut-Lafitte Bordeaux, two North Italian wines (Amarone and Roero Arneis), a Sauternes and a Grahams port wine.

IS THE DEMAND FOR RED AND WHITE FAIRLY EVEN? The demand for red and white wines is very even. The exceptions are the New World wines in first and business, where there is a higher consumption of red wine; and in economy, where the demand for red wine is almost double that of white wine.

WHAT TYPES OF BOTTLES AND STOPPERS DO YOU USE? We serve all first and business wines in regular glass bottles. In economy we offer our red wine in individual PET bottles. We do not make any special instructions to our suppliers in regards to the regular wine bottles. We also believe that the whole ceremony around serving wine includes the opening of a well-presented bottle before pouring it into a nice glass. We do respect the individual wishes and ideas of the winemakers and think that different wines have different requirements as to the lid. For the moment we are not considering cartons or pouches, but, of course, we will stay updated for new trends and demands.

DO CABIN CREW MAKE RECOMMENDATIONS TO PASSENGERS? The cabin crew receive full instruction on every wine served on board – including the producer, the grapes and background information. We also train our product ambassadors to help other staff and the passengers to understand the varieties of wines served on board.

WHAT ARE SOME OF YOUR PERSONAL FAVOURITES? I love Swiss wines, high-end New World red wines and big European ones. From Switzerland, it would be Adrien Mathier's Cuvée Madame Rosmarie from the Valais region. From elsewhere in Europe it would be the French Château Lascombes and the Spanish Vega Sicilia Unico (my all-time number one). My favourite new-world wines are Opus One from the USA and Penfolds Grange from Australia.

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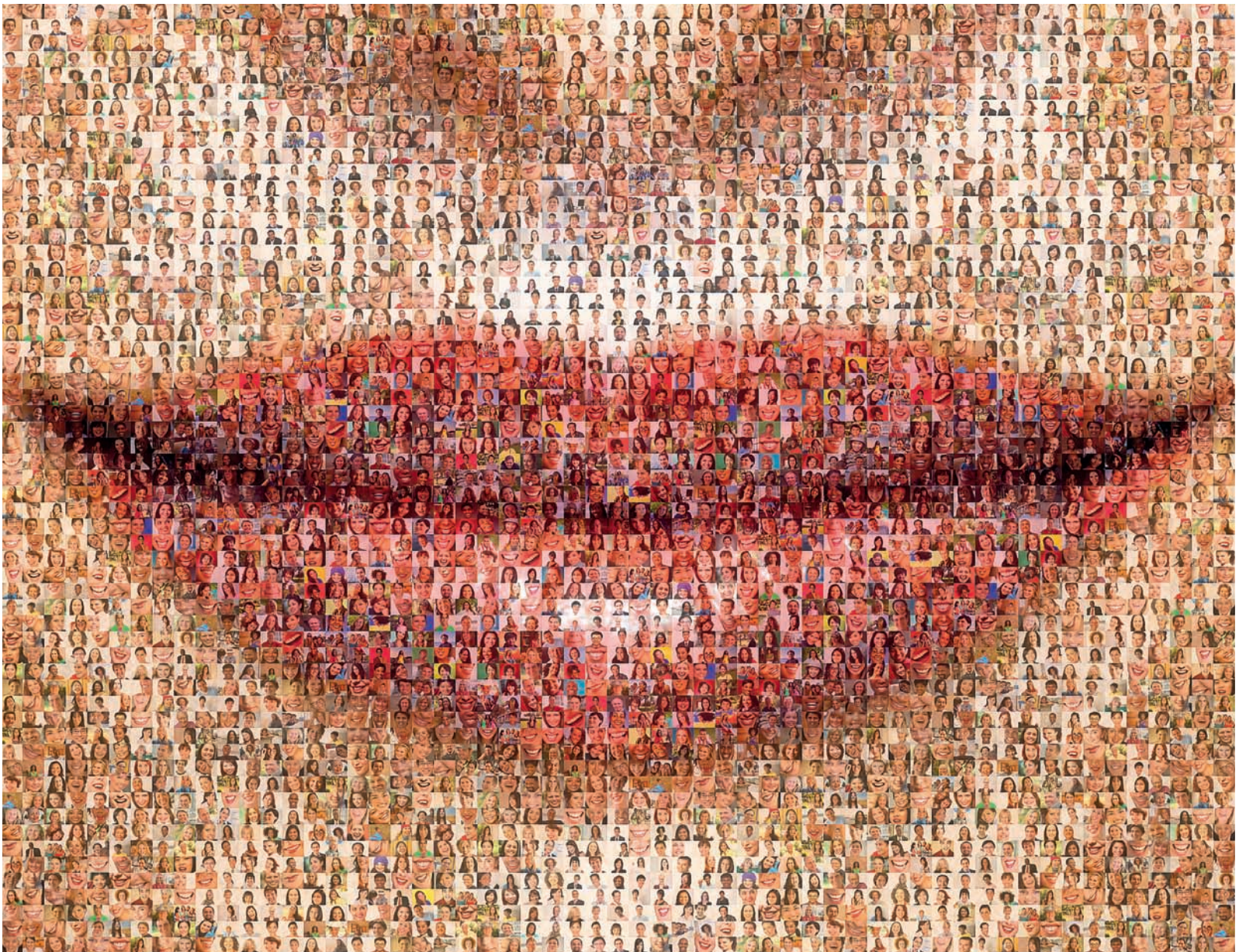
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