



Like a fine-tuned orchestra, great airline foodservice depends on every single galley instrument working in concert. With that in mind, industry innovator Monogram Systems is creating a new product suite that will redefine efficiency, reliability and the passenger dining experience. Now sit back, relax and prepare for an entirely new level of performance.

MONOGRAM SYSTEMS
CABIN INTERIORS







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food**glorious**food

Welcome to the first issue of Airline Catering International, a supplement by the team behind Aircraft Interiors International, for you, the airline personnel, caterers, manufacturers and suppliers specialising in inflight catering and service.

I doubt many passengers realise quite how complicated serving food in flight is. Most of us have grumbled at some point in the past about inflight food. Even if our own prowess in the kitchen is limited – and my personal culinary atrocities include a batch of fudge inadvertently spiked with glass from the sugar thermometer, adding potential injury to insult (I'd already burnt it) – as a fee-paying customer, one expects appetising fare.

Luckily our news section is bursting with airlines who understand that food is the way to many a passenger's heart. From leveraging the star power of top restaurants and chefs (see page 32 for our interview with Marc Fosh, Lufthansa's next 'Star Chef'), to seasonal fare, regional specialities, and partnerships with well-known brands, there's more than one way to achieve airline product differentiation and customer loyalty.

Of course, there are other reasons to strive for quality – as our feature on the rise of buy-on-board schemes on page 26 illustrates. Airlines can, and are, making ancillary revenue from meals. Virgin America in particular is an interesting case, enabling passengers to order on demand through the seatback IFE. We take a look at what passengers are willing to pay extra for, and in which cabin classes, flight lengths and sectors; and how the technology may evolve. "While today much of the sales activity is dependent on specialised onboard POS devices to complete transactions, tomorrow the onboard buying experience will increasingly incorporate access through IFE, personal devices such as the iPhone and the BlackBerry, and wherever there is internet access," says Richard Cushing, senior vice president and general manager at seatback technology provider GuestLogix.

Elsewhere we tackle the issue that just won't go away - what is to be done about the waste generated by inflight catering (page 14). With landfill prices rising, many airlines are acting now to reduce the amount they send there - with schemes varying from using rotable or biodegradeable service equipment, to separating waste on board. But for inflight supplier deSter, airlines would be better off focusing on weight loss. "The impact of the weight-driven emissions makes all other lifecycle steps negligible by comparison," says Thorsten Strauss, marketing director at the company.

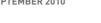
On this note, we take a closer look at other inflight equipment designed to save weight – with a round-up of some of the latest trolleys on page 12, and a feature on Airbus's new SPICE galley standard on page 20. Airbus says the system, which replaces trolleys with a foldable service cart and boxes, could save 400-600kg on a typical 250-300-passenger wide-body.

All in all, it's clear there's plenty of food for thought.

Izzy Kington, editor













mains



014 green dreams

Inflight catering produces a colossal amount of waste - but what can airlines and equipment manufacturers do about it?

SELWYN PARKER, AIRLINE CATERING INTERNATIONAL



020 standard bearer

Airbus says airline concerns about the potential operational problems of its new SPICE galley standard are exaggerated and vastly outweighed by the likely benefits - the first SPICE units are set to enter service in 2013 BERNARD FITZSIMONS, AIRLINE CATERING INTERNATIONAL

silver service 026

Can airlines make money from meals without alienating passengers already 'nickel and dimed' at every turn? PAUL SKELDON, AIRLINE CATERING INTERNATIONAL



star turn 032

Michelin Star chef Marc Fosh reveals the rigours of working with Lufthansa and LSG Sky Chefs as part of the airline's renowned Star Chefs dining programme

ANTHONY JAMES, AIRLINE CATERING INTERNATIONAL





















sides



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Customisation is key for LSG Sky Chefs' customers

testing the water 040

IWG believes the first airline to dip its toes into inflight water treatment will lead a revolution



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winning formula

The latest galleys and inserts from Sell reflect demand for upgrades in both form and function

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boxing clever

Bored of traditional meal trays, Quodpod designed an alternative

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An alternative to glass wine bottles from Ratcliffe & Brown Wines & Spirits that could save weight, space and energy

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all inclusive

A new range of complementary inserts for the entire galley, from Monogram Systems

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better all round

Bucher Leichtbau's involvement in the E-cab logistic optimisation project resulted in a new galley

050

spread the word

IDB Deutschland is bringing a well-known brand into the cabin with individual butter portions and cheeses





Continental Airlines has started selling cocktails on board. The drinks, available in economy class on flights to North American, Caribbean and Latin American destinations, can be purchased with a major credit or debit card.

Continental partnered with Stirrings to offer mojitos and pomegranate martinis. The mojito blends mint, cane sugar and lime juice, and is served with Bacardi Light rum on ice for US\$9 (£5.96). The pomegranate martini blends pomegranate, cane sugar and lemon juice, and is served with Skyy Vodka on ice for US\$9. The cocktails are available without alcohol for US\$3 (£1.99). The airline has also teamed with Red Bull to offer its energy drink – on its own for US\$3, or paired with Skyy Vodka on ice for US\$9.

The new beverage menu is part of Continental's initiative to offer customers more choices in flight. In the autumn, the airline plans to introduce healthy food choices for purchase in economy class on many US/Canadian and Latin American routes. Continental will continue to offer free snacks and unlimited non-alcoholic beverages, including coffee, tea and a selection of soda and juices.



Continental sells cocktails in economy class

THAI calls in the expert

Thai Airways (THAI) has appointed associate professor Srisamorn Kongpun to consult on Thai and Asian dishes. Kongpun will work with THAI's global catering partner LSG Sky Chefs to enhance the taste and presentation of Thai dishes, as well as some other Asian recipes on the airline's inflight menus. Kongpun has published over 20 Thai cookery books and is a senior advisor on the teaching of Thai cooking for the Thai Ministry of Labour's Skill Development Department. Meanwhile the airline is also building a new catering facility at Krabi International Airport in southern Thailand, which is due for completion by November 2010. The facility is designed to produce 1,250 meals a day for customer airlines. The airline's board approved a sum of Bt34 million (£0.7 million) to cover the construction of the 1,100m² facility on a plot of land covering nearly half a hectare. In other news, in July 2010 the airline added a 'dish of the month' to its onboard menu on domestic and international routes.

Virgin America launches tab

Virgin America has unveiled some big changes to its Red IFE platform, including an open tab service. Passengers swipe their credit card once and keep a tab running through the flight, ordering food, cocktails and more on demand via the touchscreen seatback menu. The airline is also now offering suggestions on food pairings, and has launched a new range of cocktails. Passengers can select a cocktail from the touchscreen and it will be brought to them via tray service. Meanwhile, in July 2010 the airline unveiled a new summer menu with a focus on fresh and seasonal options. Firstclass offerings include a butterscotch pudding with vanilla bourbon mascarpone created by pastry chef David Lebovitz, formerly of Chez Panisse Restaurant in Berkeley, California, USA. The new Main Cabin menu ranges in price from US\$7-10 (£4.60-6.57), and is free in Main Cabin Select. Virgin America also offers prepared meal boxes in three varieties, each available for US\$7 (£4.60).

Singapore boosts wine list

Singapore Airlines has added six Grand Cru Red Burgundy labels as part of its wine selection for suite and first-class passengers. Red Burgundy is a red wine label originating from the French region of Bourgogne and made predominantly with the Pinot Noir grape variety. Suite and firstclass passengers can also pick from a selection of beers; liqueurs; alcoholic and non-alcoholic cocktails; Pérignon 2000 and Krug Grande Cuvée champagnes; wines from France, Italy, Germany, Australia, New Zealand and the USA; and port wine from Portugal. Singapore Airlines' wines are selected by three wine experts – Michael Hill-Smith, Jeannie Cho Lee, and Steven Spurrier. The airline serves approximately 2.1 million bottles of wine on board every year, across all classes. "As with our second-growth Bordeauxs, the reputation and quality of the Grand Cru Burgundies are pretty much as good as we can get. All six labels would be five stars, without question," said Spurrier.







Oman Air launches à la carte inflight menus

Oman Air has designed new à la carte menus with Gate Gourmet for flights between London Heathrow and Muscat, Oman. There are menus for each class – first, business and economy. Each uses seasonal ingredients, draws on both Arabic and European influences, and combines contemporary and traditional elements. Highlights include caviar, poached fillet of beef and Loch Fyne gravadlax. Oman Air's flights from London to Muscat leave in the evening, so the airline has created substantial dinner menus. Morning dishes include a full cooked breakfast.

"We have found that couples travelling together will often share their meals. One has a European meal and the other the Arabic selection, and they happily swap half way. Our European meals are designed so there should be something for everyone, including a lovely French caviar – but for that you have to join us in first class," said Gerhard Engleitner, manager of inflight menu development at Oman Air. "In economy, we offer a three-course meal – a light appetiser, followed by a choice of three main courses, including one dish with an Arabic twist, and a vegetarian option, with a dessert to finish."

VIP catering system enhanced

Caeroscene IT Solutions and Private Flight Global are partnering to overhaul the catering component of Caeroscene's VIP trip support solution. A customised version of Private Flight's online ordering system for inflight catering will be installed to integrate catering requests directed to Caeroscene by clients. The system enables food and beverage ordering from a network of approved and ad-hoc catering providers around the world. Orders are placed instantly via a secure online platform with order fulfilment tracked and built-in notifications to alert Private Flight to any schedule delays. Within the system, Caeroscene Flight Support personnel can create and save favourite menus for repeat order placements, as well as select and combine standard or commonly requested items to expedite the order process. In addition, when requested by clients, Caeroscene can use the managerial reporting tools to present clients with information on their catering expenditures.

Frontier goes live with GuestLogix

Frontier Airlines, a subsidiary of Republic Airways, has deployed the GuestLogix onboard store solution to accept credit cards using its point-of-sale handheld devices and transactions platform on all flights, including those operated by Chautauqua Airlines and Republic Airlines. GuestLogix is also providing back-end inventory controls to manage the movement of products on board. Frontier is now selling snacks, meals and beverages and plans to expand its retail offering to include OnTouch merchandising for ground connections and other travelrelevant destination-based products and services. "Offering one convenient onboard store platform on our branded flights is another step that both improves the customer experience and furthers the integration process of Frontier and Midwest Airlines," said Wayne Heller, executive vice president and COO for Republic Airways. Republic Airways' two branded carriers, Frontier and Midwest, are combining under the Frontier Airlines name.

Base Handling recycles ice cubes

In April 2010 Servair was awarded the Eco-Friendly Actions Trophy by Paris Airports (ADP) and the French Environmental and Energy Management Agency (ADEME). The award was for Servair subsidiary Base Handling, which has found a way to reuse water from ice cubes at Roissy Charles de Gaulle Airport. Every day, 600 l of ice-cubes were thrown into waste compactors and then incinerated, so Base Handling devised a procedure to reuse the water from ice cubes with the help of containers, filters and pumps. All its workshop floors are now cleaned with this recycled water. Servair and its subsidiaries also presented four other measures for the trophy - Orly Air Caterers' (OAT's) organic certification for its meals; Base Handling and CPA's reduced use of cleaning products; OAT's implementation of automatic shutdown for computers; and ACNA Orly's water supply truck. These measures were all awarded Eco-Friendly Action Certificates, in recognition of their promising future.





For this year's Islamic holy month of Ramadan, Emirates launched several initiatives with fasting customers in mind. For flights departing close to Iftar, Emirates provided small snack boxes at the boarding gates. The snack boxes, containing vegetable calzone, namoura dessert, dates, water and a laban drink, served as a quick snack so that passengers could break their fast immediately.

Passengers who were in flight when the sun set were informed of the Iftar time by the captain. Emirates provided large Iftar meal boxes for fasting passengers in flight, comprising an array of traditional Arabic dishes such as hummus with crudités, mini Arabic bread, traditional chicken shawarma, pistachio baklava, dates, banana, laban drink, calzone, dried apricots and prunes, and roasted almonds.

Non-fasting passengers travelling on Umrah and Jeddah flights received a cold meal instead of the regular hot meal on flights taking off after sunrise and before sunset, in respect to the many Muslim passengers completing Umrah.



Emirates offers inflight Iftar service for Ramadan

KLM pilots à la carte catering in economy class

KLM Royal Dutch Airlines has tried out à la carte catering on board. Passengers travelling in economy class on flights from Amsterdam to Bangkok and Taipei, Dubai, Cape Town, Singapore and Denpasar were able to choose from four dishes up until the end of August 2010. The menu was part of KLM's Delicious range, introduced in economy class on intercontinental flights in February 2010. Passengers ordered online, between 30 and 24 hours prior to departure. The menu was offered at a cost of €15 (£12.25) per dish. Customers could choose from options including a Japanese meal, an Indonesian rice table, a Bella Italia meal, Italian dishes, and a meal of sustainable organic chicken, vegetables and cheese.

New flight kitchen in Ecuador for Gate Gourmet

Gate Gourmet has transitioned its airline catering, production and provisioning operations in Guayaquil, Ecuador, to a new facility at José Joaquin de Olmedo International Airport. The new kitchen began full operation on 6 July 2010, and has an open layout designed to streamline processes and allow for more warehouse storage. The facility also features energy-efficient light fixtures and high-precision appliances designed to reduce water consumption. Gate Gourmet operates a second flight kitchen in Ecuador at Mariscal Sucre Airport. The company is also expanding its airline catering and supply chain capabilities to Tokyo's Haneda Airport, where international flights are due to start in October 2010.

SriLankan Catering wins award for energy efficiency

SriLankan Catering recently won a National Energy Efficiency Gold Award from the Sri Lanka Sustainable Energy Authority. The company also holds ISO 14001:2004 certification for best environmental practices. SriLankan Catering launched a wide range of environment practices over the last year in its flight kitchen at Bandaranaike International Airport. These included an autoclave food waste sterilisation machine that destroys possible contaminants in the waste from used food trays and converts it into food for farm animals. The company is also recycling all types of waste products - food production waste, paper, plastic, polythene, tin, aluminium and glass. The company's Environmental Excellence Committee, which is headed by the CEO, is implementing a three-year plan for conservation. This has even seen employees using stairs instead of lifts, small ovens being used for small loads of food, and sensor-operated toilet fittings. There is also a comprehensive project to train employees in environmental best practices.







Leeways updates packaging for airline market

Iberia refreshes Business Plus meals and wines

Iberia has remodelled its Business Plus meals on flights departing from Madrid, with a different menu of Mediterranean dishes each month designed by chef Sergi Arola. Pastry chef Paco Torreblanca has also devised new pastries freshly made for each flight, and travellers may also enjoy new flavours of Häagen Dazs ice cream. Light suppers on night flights leaving Madrid have also been changed, and are now comparable to the three-course lunch menu. The most recent wine list, which is changed every three months, includes whites from Rías Baixas and Rueda, reds from La Rioja and Ribera del Duero, and a newcomer from Cadiz. Passengers can watch a video tasting session on board.

LSG Sky Chefs signs joint venture for facility in Sofia, Bulgaria

LSG Sky Chefs has entered into a joint venture with Bulgaria Air, in which the caterer holds a minority share. The partners will establish a catering facility at Sofia Airport, with initial volumes of 3,000 meals per day. "LSG Sky Chefs continues to expand into new markets with high growth potential," said Alfred Rigler, the company's COO for Africa, eastern Europe, India and the Middle East. LSG Sky Chefs also recently won a contract with Air Canada, for eight cities in north America, four in Europe, two in Asia, and four in Latin America. LSG Sky Chefs has served the airline for over 12 years in 15 of these locations, but the deal secures new business at London Heathrow, Mexico City and Shanghai Pudong.

has acquired new business in the airline catering sector by altering some of its clients' existing products. The concept was to improve the usage, display and ease of handling of a food-to-go salad snack product, while at the same time reducing cost through improved filling and sealing practices. Leeways also reduced material usage by adding various strengthening features to the packs, which enabled the company to reduce the product's weight by 18%. The complete range of new packs was launched on the airline market in June 2010.

Packaging company Leeways

To accommodate the success of this range, Leeways introduced a new racked warehouse. This has helped it to improve its stockholding capability and reaction to short-term demand.

The company uses a variety of thermoforming machines to enable competitive costs, whether products are needed in high or low volumes. In addition, any number of materials can be used, so recyclable, biodegradable and sustainable products can be manufactured.

deSter to use recycled plastic to make onboard service equipment

gategroup member deSter, which supplies onboard service equipment to airlines, is investing in new equipment that can turn recycled plastic into food contact items. The company will install the new plastic extrusion machine at its manufacturing facility in Hoogstraten, Belgium. Extrusion is the process used to form plastic sheets from small plastic granules. These sheets are then formed into a wide assortment of onboard service products such as tray set-ups, hot meal service equipment and food boxes. The decision to acquire the new machinery was taken after labour unions representing employees reached an agreement with the company to justify the long-term investment and keep the facility cost competitive.





European business jet operator NetJets Europe has rolled-out a new eco-friendly catering package and recycling initiative. The catering box is fashioned from sustainably sourced bamboo and features wooden cutlery and porcelain inserts – all of which are recyclable. The lids are also biodegradable, and the porcelain inserts can be re-used.

Each box will now take about half of the space of the previous catering box and the package will be adapted to suit the storage requirements of the small and mid-sized jets in NetJets Europe's fleet. Recycling targets have been set and NetJets is working with its crew, local FBOs, anchor caterers and cleaning companies to ensure that equipment can be reused at the end of each flight to maximise the impact of the new package.

"NetJets Europe takes its environmental responsibilities seriously, and this new packaging is just one way in which the catering department can contribute," said Ricardo Paiva, senior catering manager at NetJets Europe. "We're encouraging our crew to work with our ground staff to achieve and exceed our recycling targets and minimise wastage."



NetJets Europe debuts eco-friendly catering packaging

Dragonair teams with prestigious restaurants in anniversary year

Dragonair has launched a new inflight menu featuring Chinese dishes developed with the Michelin-starred Lei Garden restaurant. The menu is available in all classes on Hong Kong to Beijing and Shanghai flights, as well as in first and business class from Hong Kong to Taipei and Kaohsiung, until July 2011. The first-class offering includes appetisers of spicy mustard tuber and marinated prawn with spicy vegetable, and main courses such as sautéed scallop with asparagus and spring onion in XO sauce. A series of new menus, covering both Chinese and Western cuisines, and designed by renowned Hong Kong eateries such as JW's California and the Dynasty Restaurant, have been introduced since April as part of the airline's 25th anniversary celebrations. Kee Wah mini cookies (in six flavours) and pineapple cakes are also being offered on selected flights until the end of the year.

Alaska Airlines enhances Northern Bites meal service

Alaska Airlines has begun offering its Northern Bites fresh meal service on nearly every flight over two-and-a-half hours, allowing customers to purchase a hot, fresh meal or picnic snack pack on twice as many flights as previously available. The meal service has also been upgraded with new offerings designed by executive chef Clifton Lyles. New items include a grilled chicken ciabatta sandwich with sundried tomatoes, basil and provolone cheese; a salami and fresh cheese plate; and a fresh fruit and cheese plate. For breakfast flights, passengers can sample a scrambled egg, mushroom, cheese and ham skillet; or egg, cheese and sausage on a warm biscuit. The airline will also continue to offer its Angus beef quarter-pound cheeseburger. Offerings will differ based on time of day and flight, and will cost from US\$6 (£4.07) to US\$7 (£4.75).

10th anniversary for Lufthansa's Star Chef programme

Lufthansa's Star Chefs culinary programme is celebrating its 10th anniversary. A top chef creates a new inflight menu every two months for first and business class on longhaul flights out of Germany. To celebrate, the airline will serve a 'greatest hits' menu of dishes from the last 10 years on these flights during September and October 2010. Frequent travellers have decided the menu through an online ballot. Lufthansa is also introducing several new practices – such as making each Star Chef more central. For example, passengers might be offered a special salt to take home if the Star Chef on duty is known for using diverse salts. In addition the airline will offer a monthly choice of classic dishes, such as wiener schnitzel, alongside the Star Chef menus. Lufthansa is also calling on star power with a new wine in European business class from the estate owned by actor Gerard Depardieu.











àlacart

Manufacturers are finding ways to make their new trolleys lighter, brighter and easier to use

IZZY KINGTON, AIRLINE CATERING INTERNATIONAL

quantum leap

Quantum, jointly developed by Norduyn, using its technology and production capabilities, and LSG Sky Chefs, with its experience in airline catering, crew handling and fleet management, has been finely tuned to meet the daily needs of airlines and their crews. Made of lightweight composites over a foam core, the companies say weight savings of 40% have been achieved compared to traditional aluminium-frame trolleys. The final weight of each trolley depends on the configuration an airline chooses, but the half-size trolley can weigh less than 10kg, and the full-size unit approximately 15kg.

The companies say further benefits of using composite materials include a higher level of insulation, reducing the amount of dry ice needed; and a more durable and impact-resistant structure. They also say the material makes it easier to incorporate RFID chips, for improved fleet management.

Features, colours and branding can be adjusted to each airline's specifications. Quantum has received the TSO C 175 airworthiness certification. Current models include the ATLAS half-size and full-size trolleys. Further models will be added to the series in 2011.



bar fly

Air Eltec is developing a prototype for a new electrically operated automated beverage trolley, sky-tender. The trolley is designed to dispense over 12 different drinks (including juices, soft drinks, and cold and hot beverages) from standard-size cartridges at the touch of a button. Depending on how it is equipped, up to 30 different kinds of mixtures are available. The company says that each trolley will dispense 150 servings, fit into standard galley storage space, and be available in a wide array of colours to reflect the airline's brand image.







brains and beauty

DKA designed its EcoLite trolley for an enhanced, curvier appearance – with flushed handles, a round lock pan and round continuous edge extrusions. The side panels can also be coated with colourful picture prints to enhance the overall appearance and reflect an airline's branding.

But the company promises the trolley's improved aesthetics are not achieved at the cost of durability and performance – for example thermal performance is enhanced through the use of thicker insulation panels, smaller metal extrusions and hermetic door seals.

Made from aluminium, a full-size ATLAS-standard EcoLite trolley weighs 16kg, while a half-size model weighs 10.2kg. The company says that customised dimensions can be easily accommodated, without the need for additional tooling. Options including an external dry ice drawer, pull-out serving table, and air vents can also be incorporated.

The trolley entered service in April 2009. Thousands of units are already in service with airlines based in Europe, north Asia, South America and Oceania.

in line

Onboard Logistics has created a castor alignment system with directional control. Using the system, the crew can lock a trolley's four castors at the same time by pushing down on the red and green pedals together. This ensures that the trolley can go forward or backwards in a straight line. The trolley reverts to a 360° rotation when the green pedal is pressed alone.

The company says the main benefits of the system are that it eases access in and out of galley openings for cabin crew, thus reducing back strain injury; it allows straight line movement in the cabin; and enhances sideways stability in kitchen operations.



roll with it

Korita Aviation has endeavoured to produce a reduced weight trolley at a competitive price. The resulting trolleys are constructed of lightweight aluminium profiles with what the company describes as 'low maintenance' wheels and braking system. A dry ice tray is standard and the trolley can be fitted with the airline's name and logo. Other options include a pull-out table, slam-shut locking, kick plate, embossed logo, and custom colours.

The standard Atlas half-size version weighs 13.1kg, but can be brought down to 11.9kg with optional lightweight wheels. Likewise the Atlas full-size trolley's standard weight of 21.25kg can be reduced to 19kg with the lightweight wheels.



greendreams

Inflight catering produces a colossal amount of waste – but what can airlines and equipment manufacturers do about it?

SELWYN PARKER, AIRLINE CATERING INTERNATIONAL





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Time is running out for airlines to reduce – or, at least, better manage – their inflight waste. Pressure is mounting from airports, local authorities, government agencies and lobby groups to devise onboard solutions that cut back on the waste despatched to landfills as well as facilitating the whole recycling process.

"Airlines are asking us how we can help them meet these demands," says Daniel Percy, marketing manager at Airbus's aircraft interiors division. "The main pressure is coming from higher prices for landfill."

Municipal authorities in Europe, the UK and the USA have already begun to charge airlines higher taxes for each tonne of waste sent to landfill. At London

Heathrow, where airlines dump 70 tonnes of waste a day, imposts will jump from £40 (US\$62.50) to £72 (US\$112.50) per tonne by 2012. At some US airports charges are set to triple over the next few years, especially at long-haul hubs.

According to a 2010 study by US lobby group Green America, the average airline passenger generates 1.30 lb (0.59kg) of waste per flight. However at San Diego International Airport, an environmental plan has already cut that to 0.50 lb (0.23kg) per passenger, and the airport has mandated airlines to halve that again by 2012. One of the 'greenest' airports in the USA, San Diego recycles over 80% of inflight waste, mainly in the form of aluminium, glass, plastic, cardboard, paper and steel.









ILLUSTRATION BY CLAIRE SCULLY

SUSTAINABILITY

- 01. Deirdre Kotze, environmental manager, Thompson Airways
- 02. New pillows and blankets on Thompson
- 03. Lean on Me tray from deSter

Similarly, UK airport operator BAA is pushing through tough targets. Last year waste per passenger at London Heathrow fell from 0.82 lb (0.37kg) to 0.79 lb (0.36kg). Although these reductions seem low or even insignificant, they are all heading in the same direction. The reason for the authorities' haste is the frequency of flights. In the US alone the number of passenger trips approaches 700 million a year, producing some 450 million tons of inflight waste.

Passengers are also eating and drinking more – in Europe meal numbers on non-domestic flights rose in every quarter last year, up by between 12 and 24%. Meal numbers on flights to Asia showed roughly comparable growth.

SORT IT OUT The pursuit of green solutions is forcing new inflight disciplines. Airports want airlines to improve the way they separate waste during flights especially aluminium cans, plastic and food - so they are more easily and quickly sorted on terra firma. However conflicting requirements often complicate things. For example, the USA's Manual for Agricultural Clearance says aluminium cans, glass, and plastic containers can only be recycled if they have never held milk or other dairy products - they can't even be stored next to milk products.

Some authorities insist that to recycle anything, all products must be separated on board, a regulation which "many airlines interpret as a ban on recycling any international waste", argues Green America's report. Further complicating things, certain airports work on either a centralised waste system where the airport is responsible for managing the inflight waste, or a decentralised waste system where the airline does the job. Confusingly, the result is that cabin crew have to adjust their collection procedures according to the destination.

Food is a particular problem because some governments ban or restrict its recycling in line with disease prevention regulations. For instance, Heathrow's owner BAA recycles about 60% of inflight cabin waste but requires airlines to separate leftover food for incineration. Even though Heathrow boasts two dedicated airside facilities for processing waste, much of it still goes to landfill.

LEADING THE WAY The good news is that more airlines are pursuing greener inflight strategies with new kinds of packaging, onboard streaming and recycling programmes.

Delta Airlines gets top marks from Green America for its response. Among other things, it boasts menus made from



Thomson Airways is on a tight weight loss schedule. Its self-imposed target is to shed 6.5 tonnes off its aircraft by the end of 2010. And the airline is leaving no kilo unturned as it closes on the deadline. The plan calls for a third of all onboard waste to be recycled, the equivalent of 13 tonnes of aluminium a year, and everything has come under the microscope.

In the toilets, a switch to foaming soap has cut the number of bottles by half, or 40,000 a year. Rather than bin the headsets in premium class, the earpieces are replaced while broken ones are fixed. In economy class passengers pay for headsets, and take them home. The blankets come in a package sourced from a sustainable forest instead of plastic. Deirdre Kotze, environmental manager at Thomson says this means "there's 900,000 less plastic bags going to landfill every year". The inflight magazine has also slimmed down in pages for a per-flight weight loss of just 3 lb (1.36kg), but it all adds up – the total CO_2 saved per year adds up to 29 tonnes.

Finally, Thomson is switching from material to leather for the seat covers. It says the leather doesn't need laundering (saving 150,000 industrial washings a year), has twice the lifespan and can be recycled.









recycled paper and printed with soybased ink, and carpets that are recycled when worn. Within the next couple of years, Delta plans to serve food and drink in containers made from disposable corn products. The airline already recycles aluminium cans, plastic bottles and trays, drink cups and newspapers.

On Virgin Atlantic, ranked third in the Green America survey, waste management is part of the crew's job description. Flight attendants collect plastic glasses for reduction into pellets that are then converted into coat hangers or even video cassettes. They also gather economy-class amenity kits after the flight and separate out unused items to be added to new kits. Once upper-class dining linen is worn, it's donated to prisons rather than dumped on landfill. Similarly, out-of-date magazines are given to hospitals. Suppliers are expected to do their bit. For example wine companies now supply champagne in reusable cardboard. The airline has pledged to recycle or reuse half of its inflight waste by 2012.

Short-haul carriers typically generate less waste but airlines such as easyJet are

OF THE WEIGHT-DRIVEN EMISSIONS

LIGHTEN THE LOAD Leading suppliers such as LSG SkyChefs also have an important role to play, particularly in the pursuit of ever-lighter equipment -LSG's Quantum trolley, developed in cooperation with Norduyn (see page 12 and 36 for more details) is a good example.

Thorsten Strauss, marketing director at inflight supplier deSter says that for airlines, weight loss is everything. deSter is a division of the giant Gateway group, which distributes the Aerocat lightweight trolley, and among other products provides thin glasses for Lufthansa. "An internal deSter study conducted by two European universities shows that nothing in the lifecycle analysis of an inflight service product comes even remotely close to the impact of weight," says Strauss. "Weight is proportional to fuel consumption and that is proportional to cost and emissions. The impact of the weight-driven emissions makes all other lifecycle steps negligible by comparison."











For much the same reason, anything that saves space is highly desirable. DeSter's 2009 breakthrough, the Lean-on Me (LoM) tray, stacks so efficiently that it allows airlines to dispense with one out of four trolleys. According to Deirdre Kotze, environmental manager at Tuiowned Thomson Airways, which has been judged the most environmentally responsible airline at the British Travel Awards for the last four years in a row, the LoM tray "allows us to free up on average three and a half carts worth of space previously used for catering". The overall result was a 14% reduction in the weight of surplus products, a 6% jump in consumable offerings, and a net saving in weight of about 385.81 lb (175kg) for every B757-200. "In terms of CO₂ reductions, it amounts to about 1,700 tonnes a year," adds Kotze.

And that's not all. The extra space freed up by the LoM tray means the airline can now store both outbound and inbound catering in the galley. In turn, this translates into a reduction in the use of ground infrastructure during turnarounds, with consequent savings in time and cost.

BREAK IT DOWN Suppliers are also fast developing biodegradable products. Since April, Brazil's TAM Airlines has been serving food in sugarcane packaging. As Claudia Ling of LSG SkyChefs, which designed the range for TAM, says, these products have all the right credentials: "The material is a nontree, annually renewable material that is 100% biodegradable."

Some types of inflight waste can be recycled more efficiently than others. Water, for instance. As Servair, the Air

France-owned catering giant, has found, ice cubes can be given another life. Rather than throw them into waste compactors for incineration, the company's base handling operations now melt and reuse them to clean workshop floors.

Similarly LSG SkyChefs, which washes over two billion components every year from trays and cutlery to trolleys, has figured out a method of operating 500 industrial dishwashers located at over 200 facilities around the globe at maximum ecological efficiency. "The machines were connected to a central computer that controlled their operation in real time," explains Ling. "Everything is monitored on a continuous basis and it has led to significant savings in energy and water consumption."

One of the system's secrets is SIMBA, a water consumption and energy tracking tool that is so efficient that at certain sites the use of water and detergent is down by 50% and energy down by 15%. According to LSG Sky Chefs, other





- **05.** Thorsten
- Strauss
- **06.** Thomson Airways wants to shed 6.5 tonnes off its aircraft by the end of 2010

on-ground measures often yield big results. "In the US and Asia, we implemented a recycling process for aluminium cans and cardboard at selected sites," says Ling. "At Hong Kong this has already resulted in waste reduction of 11%."

However, ecological virtue inevitably comes at a price. For example, starch-based plastics are ten times more costly than disposable plastics. Still, suppliers are working much harder than even two years ago to offer green solutions and their job will be easier when a new wave of bio-friendly polymers becomes more freely available and more affordable as a result of economies of scale.

"At present the advances in materials technology are incremental," adds deSter's Strauss. "Until these new polymers appear, the challenge is in engineering and design." Convinced that the long-term future of polyethylene terephthalate (PET) products will be in recycled source material, deSter has invested heavily in expanded production of these plastics.

COLLECTIVE CONSCIENCE Meanwhile we're far from a global governmental consensus on the seriousness of the problem. While most airlines flying into North America, western Europe, Australasia and, to a lesser extent, the Middle East operate under increasingly stringent official guidelines, many other countries remain relaxed, particularly in Asia and emerging markets. Still, it's clear that the industry is rapidly developing an environmental conscience even if some airlines are more aware than others. "Airlines want to do recycling - they want to do the right thing," says Airbus's Percy.

However there's only so much that can be done in the air to reduce the volume of waste destined for landfill and recycling on the ground. To put it another way, however hard San Diego tries, passengers will never leave behind zero waste. The main onus is still on municipal and other authorities to invest in airport facilities. That's why BAA has a zero landfill policy. The airport operator plans to recycle half of all waste from Heathrow and Gatwick and to incinerate the rest to generate electricity. \subset

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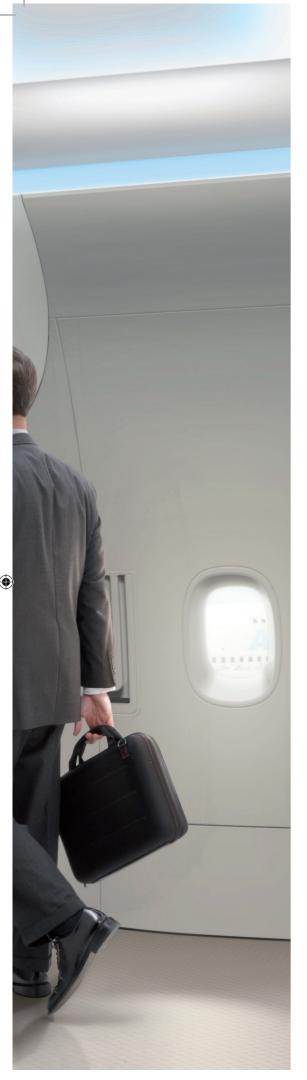




Airline Catering International SEPTEMBER 2010







standardbearer

Airbus says airline concerns about the potential operational problems of its new SPICE galley standard are exaggerated and vastly outweighed by the likely benefits – the first SPICE units are set to enter service in 2013

BERNARD FITZSIMONS, AIRLINE CATERING INTERNATIONAL

SPICE stands for space innovative catering equipment, and given that the prevailing ATLAS and KSSU galley standards were developed to support the service entry of the B747 and McDonnell Douglas DC-10 wide-bodies in the early 1970s, innovation in the catering field can hardly be considered premature.

Using the ATLAS tray size as its basic unit, to avoid making existing trays and drawers obsolete, SPICE replaces the traditional trolley with a foldable service cart and lightweight boxes. The boxes are stowed in flameproof, 9g-certified galley compartments, so they can be made of lightweight materials such as cardboard or plastic. A transfer table in the galley lifts boxes into storage compartments above the counter, so space can be used more efficiently.

Airbus says the result is a smaller, lighter, more ergonomic and more efficient galley. And not just a bit smaller or lighter: it calculates the weight saving at 400-600kg for a typical wide-body seating 250-300 passengers, and well over a tonne for an A380. At the same time, the space saved by the more efficient storage, along with standard-sized

equipment and higher-capacity ovens and beverage makers, typically means an entire galley monument can be removed, making room for additional seats.

TURNING POINT But what is the path from concept to service? "We've been talking to customers and showing them the galley," says Daniel Percy, aircraft interiors marketing manager at Airbus. In response to feedback, Airbus has been using an A330 fuselage with an economyclass cabin at its headquarters in Toulouse to evaluate the galley's impact on turnaround time.

"Loading an aircraft, especially at the rear door, is usually the critical path on the turnaround for a wide-body," says Percy. "So we've been asked to test that, benchmarked against today's turnarounds." Gate Gourmet, Servair and New Rest have all been involved, and LSG Sky Chefs will be. "First we will record turnarounds of aircraft on the apron at Door 4, that is our benchmark."

A galley installed at the Door 4 area in the A330 fuselage will be used to test devices that can speed up the turnaround time. "Today you have to move each trolley individually," says Percy. "You can't



SPICEGALLEY

01





create a device that can help you to speed up your turnarounds, but with SPICE, because we use boxes, we can. We'll be testing different configurations to see how much we can reduce loading time."

The other aspect the airlines asked Airbus to validate was the cabin service, particularly in economy class. "We've done some testing already and we were very encouraged," says Percy. "The cabin crew that we tested with said they thought the service was quicker, but we didn't have a benchmark. So this year we're benchmarking airline economy service, measuring how long it takes, and then we'll serve the same number of passengers in our mock-up in our fuselage in Toulouse and see how long it takes with SPICE. It should be quicker."

The tests will also cover new processes for handling waste on board. Waste handling is very difficult with ATLAS galleys, says Percy, but a lot of waste is generated - caterers at London Heathrow alone send 70 tonnes a day to landfill or incineration. Percy says the long-term vision would be to use all food waste for a power generation technology such as anaerobic digestion, typically producing a gas that can be burned, with a usable fertiliser as the by-product. To that end it is working with waste bag specialist Onboard Logistics. "We've tested their bags with SPICE and it's very flexible," says Percy. "The folding cart is open at the top





so you can just hang the bags down inside, enabling a lot of segregation very easily."

MIX AND MATCH Introducing a new galley standard will inevitably cause difficulties during the changeover, particularly when an aircraft with one galley standard has to be replaced by one with another. But that happens already, Percy argues. A survey of airlines found that 55% already had more than one standard of galley; even within the ATLAS standard there is enough variation to constrain what trolleys can go where.

Work with airlines that have been operating dual standards further suggests that around 0.4% of flight cycles involve the use of a substitute aircraft. "Sometimes the aircraft will be swapped to the same type of aircraft, so that's no problem," says Percy. Operational constraints such as crew availability often dictate that the same type of aircraft is used.

"The only time you're going to get a problem with SPICE is when you need to swap your aircraft and you don't have another aircraft with the same standard," says Percy. "If the replacement was a SPICE aircraft then all the catering that had been prepared for the first aircraft would have to be redone. And that causes a delay of about three hours and a typical cost of around US\$60,000 (£37,874]." But Airbus' model, which Percy says was regarded as conservative

by airlines, suggests that each wide-body is likely to suffer such a delay no more than once each year.

The benefits are much more significant. The calculated fuel saving from the reduced weight would cancel out the potential recatering cost. And the gain from the additional seat weight saving alone would outweigh it 10 times.

"When you look at the numbers it makes perfect sense," says Percy. "You can cover those costs." To assuage airlines' concerns he sometimes reminds those with more than one galley standard that they must have done a business case to look at harmonising the galley standard through retrofit. "But nobody does them, because the costs of these recatering delays are so small that you can't afford to pay over a million dollars for a shipset of new galleys - it doesn't stack up. So whatever the cost of these recatering delays, it must be significantly less than the new shipset of galleys. Otherwise airlines would be doing galley retrofits all over the place, when they merge for example, but they don't do them, because there's no business case."

PAIN RELIEF The benefits, too, go beyond weight and space saving. "We tend to concentrate on those hard economic numbers, but injuries in the galley are the top cause of injuries to cabin crew on board aircraft," says Percy. Back strains

history lessons

Once upon a time, of course, there was no ATLAS galley standard. Developed as part of a broader standardisation effort to help contain the cost and support requirements of the new B747 and McDonnell Douglas DC-10 wide-bodies, it was the work of an engineering group combining experts from partners Alitalia, Lufthansa, Air France, Sabena and Iberia; the KSSU group of KLM, SAS, Swissair and UTA developed parallel standards.

Lufthansa's Juergen Trzaska headed the ATLAS galley engineering group. "At that time each airline had its own standards and each country had its own galley suppliers," he recalls. "We took the best elements from each and adapted them, often using new techniques and materials."

Modularity was the key, with each component – storage, ovens, refrigerators and so on – sized in multiples of the smallest element, the tray, so that the airlines would be free to vary the detailed configuration.

Retrofitting the new galley to existing aircraft could be done economically only during a major overhaul, Trzaska says, so "we took the overhaul cycle of four to five years as the installation target".

The new galleys provided 10-15% more usable volume, so additional seats could be fitted to make the installation cost-effective. Reduced maintenance and overhaul costs also helped balance the equipment cost. And careful scheduling during the changeover period helped minimise exposure to recatering costs.







SOME PEOPLE FIND IT QUITE
UNBELIEVABLE THAT YOU CAN
GET RID OF A WHOLE GALLEY



from lifting could be reduced by the SPICE transfer table, while finger injuries from cabin crew struggling to free stowed trolleys whose wheels have swivelled perpendicular to the extraction direction should be eliminated. "The SPICE boxes roll on roller mats," explains Percy. "They can only roll in one direction, so there's no question of them being blocked."

Another ergonomic improvement is the simple reduction in the amount of cabin crew activity required, such as moving individual bottles and so on from standard unit trolleys into drawers and the tops of trolleys. "When you're on the aircraft, at the top of climb they pull the curtain across and then you hear a lot of rustling and banging for 10 or 15 minutes, and then they come out with some drinks," says Percy. "With SPICE, the box is already prepared by the caterer, it just comes out of the galley, straight onto the cart and can be served immediately. It's nicer for the crew and better for the passengers. And low-cost carriers and people selling drinks on board will have more sales time."

POINT TO PROVE Along with the loading and serving trials, Airbus is working with individual airlines on customised business cases. "They give us their data about how they pack their galley, we repack it into SPICE equipment and prove that the space is won," says Percy. "Some people find it quite unbelievable that you can get rid of a whole galley. But I've been through numerous examples with loading sheets

and figuratively speaking packed every single item: taken trays, bottles and so on out of ATLAS boxes and put them into SPICE boxes in the galley – on paper – and shown them where all the boxes and items are and that the galley is empty."

The second part of the analysis is a fleet study. "We plug in the numbers for the recatering delays and other costs, such as the costs to the caterer of buying the trolleys used on the ground and additional floor area in their facilities," says Percy. The result, he says, is an impressive US\$1.5 million (£0.95 million) net present value (NPV) per wide-body aircraft over a 15-year aircraft life at a discount rate of 10%. "If the NPV is zero that means you've already made the return you expect from that investment," Percy elaborates. "So if you've got anything positive on top that's additional payback." \subset

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- **01.** EPOS device from GuestLogix
- **02.** Virgin America's Red Store
- **03.** KLM 'Bella Italia' à la carte meal option

"Our traditional free-food model has served us well for many years, but we need to change to reflect today's market and customer preferences," says Jim Compton, executive vice president and chief marketing officer at the airline.

Virgin America is going even further, tapping into the potential offered by the IFE system to enable passengers to order on-demand, in the air. The airline recently adapted its 'Red' IFE platform to allow customers to, essentially, run a tab – swiping their card when they sit down and then ordering and shopping during the flight. The tab is closed either by the passenger or automatically when the aircraft descends to land.

The airline has also updated the kind of food offered, after finding that passengers, especially on the airline's transcontinental flights, want healthy





WE HAVE FOUND THAT PASSENGERS ARE WILLING TO SPEND ON AVERAGE ABOUT US\$21 PER PERSON PER



food and are willing to pay for it. In July 2010, Virgin America launched a range of fresh snacks in its cabins, designed to meet the demands of travellers looking for a healthy option. It also offers food pairings, where the customer pays for what is essentially a meal deal; and a range of special cocktails. Examples include a Pacific brie and turkey sandwich, paired with Popchips and Peach White Honest Tea, available for US\$13.60 (£8.72).

"Selling food on our flights is an important revenue stream for us and has been since we launched in 2007. But it's all about our philosophy of giving our guests choice to shape their own flight experience with us," says Amy Burr, director of ancillary revenues at Virgin America. "We have found, through research, that passengers are willing to spend on average, about US\$21 (£13.47) per person per flight, mainly on the longer haul services, typically transcontinental, so we are looking to tap into that with food that they want, and a shopping experience as well - all through the seatback entertainment system."

The service is available on all Virgin America flights, however, many are short hops and the airline foresees that most shopping for food, drinks and goods will take place on longer flights where the passenger has more time to fill. According to Burr, passengers on domestic-only flights no longer expect things for free, but do want high quality when paying for inflight service. Continental agrees, stressing that its move away from complimentary meals to a paid-for model comes after most of its competitors on domestic routes have already gone down the paid-for route for inflight catering.

BIG BUSINESS Inflight catering is set to be big business, according to seatback technology provider GuestLogix. "Global onboard duty-free sales typically amount to around US\$3 billion (£1.9 billion) each year, but the sale of meals, beverages, comfort items, entertainment, seat upgrades, travel-relevant destination-based products and services will likely surpass onboard duty-free sales this year," says Richard Cushing, GuestLogix's senior vice president and general manager. "Onboard point-of-sale (POS) technology is driving this trend."

In addition to offering food and drinks through the IFE system, Virgin America has also teamed up with SkyMall to enable flyers to shop from their seatback from hundreds of top brands like Sony, Canon, Sharp and





Michael Kors. The move marks the first time that SkyMall, which usually provides inflight shopping catalogues, has developed a product line designed specifically for purchase through a seatback IFE system. "It's much like internet shopping, with the goods delivered to you at home seven to 10 days later," says Burr. "And it fits with Virgin's aim to give our guests as much choice as possible when they fly with us."

So how will inflight sales evolve? "While today much of the sales activity is dependent on specialised onboard POS devices to complete transactions, tomorrow the onboard buying experience will increasingly incorporate access through IFE, personal devices such as the iPhone and the Blackberry, and wherever there is internet access," says Cushing.

FRAUD PREVENTION One challenge is the risk of fraud, as with other 'real world' retail platforms. "But the majority of onboard transactions today do not occur in real time, as they are batch processed upon arrival at the airport," says Cushing. "GuestLogix has taken steps to help mitigate fraud through an end-to-end retail system design that is compliant with the latest payment industry security standards. The airlines have also instituted inflight purchase limits to mitigate financial risk. With the introduction of inflight connectivity and real-time access to credit card authorisation, these limits can be eased and operators will soon be able to sell a greater variety of products at higher prices."

Cushing believes another, perhaps greater challenge, is perception. "The greatest challenge facing onboard retailing is overcoming the perception that airlines by nature are not retailers," he says. "This is changing, however, as airlines begin to place more emphasis on developing ancillary revenue streams and hire personnel from the retail industry to help optimise the onboard retail space. Additionally, as transactions become more frequent and complex the need for security rises."

But what does this mean for the crew and the traditional trolley service? For Virgin America, minimising the use of carts has been in its DNA since the airline was launched, so its on-demand food service is all part of that ethos. "When Virgin America launched we had food on demand from our touch-screen seatback system Red, and have always tried to minimise the use of carts," says Burr. "Virgin America flyers can order what they want, when they want, something that has received hugely positive feedback, especially on our long-haul routes."

And the crew seem to like it as much as the passengers. "We have found that our remote digital ordering has been welcomed by crew, as it allows tailored ordering, eliminates mass service and helps keep the aisles more clear," says Burr. "We've had this since





brand association

Even without 'fancy' IFE-enabled ordering, there are still ways of increasing revenue on board. Many airlines are getting into bed with big brands to catch passengers' eyes and wallets. UK budget airline EasyJet, for instance, has teamed up with Starbucks to deliver VIA ReadyBrew tea and coffee to passengers on its flights, all of which count as short haul.

Meanwhile US budget airline Southwest is offering passengers Corona beer for US\$5 (£3.21) a can (the same price as the standard beer carried by the carrier, it has to be said). The airline is also using the tie up with Corona to do a bit of viral marketing, encouraging passengers who do opt for a can to photograph themselves enjoying their Corona moment and then tweet it once they are on the ground (they could win a trip in return).

Continental Airlines has teamed up with cocktail mixer brand Stirrings, energy drink maker Red Bull and Skyy Vodka to offer passengers, for US\$9 (£5.77), a choice of three heady cocktails based around the drinks companies' products – a Stirrings mojito; a Stirrings pomegranate martini; or a Red Bull Energy Drink – US\$3 (£1.92) on its own or US\$9 with Skyy vodka.





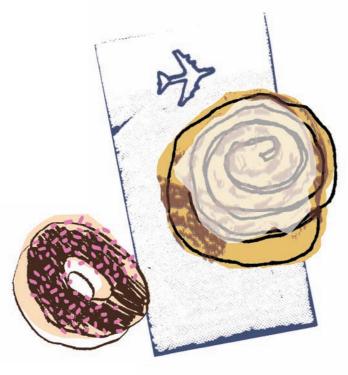
CHARGING FOR FOOD IN BUSINESS AND FIRST CLASS IS VERY UNLIKELY TO OCCUR 99



04. Virgin America offers healthy snacks for purchase on board

05. Virgin America's healthy options include this eggplant sandwich





launch, and the response from crew has been overwhelmingly positive."

But are passengers willing to put their hands in their pockets? "Onboard ancillary revenue is a growing revenue stream for us and all airlines, and we want to drive it in a way that gives travellers more value-added options they will appreciate," says Virgin America's Cush. "Believe it or not, custom cocktails, food pairings, an open tab and shop have all not only been part of our roadmap from launch, but they've also been requested by our guests."

Max Sukkhasantikul, consulting analyst in the aerospace and defence group of business research and consulting firm Frost & Sullivan, believes the model for charging passengers, started by low-cost carriers, is increasingly being taken up by full-service carriers as competition grows. "This however is only possible within Europe and the

USA at present with a flying time not exceeding five hours. The only reason why it is possible in these regions is due to the sheer volume of low-cost carriers and the interchangeability of both the leisure and business travel market that travel on both airline business models," he says. "This is due to the hybridisation of the low-cost airline business model, which enables a lowcost airline to become more appealing to the market that was not initially part of its target market. The economic downturn further accelerated the interchange of passengers between different airline business models."

TRADING PLACES So what does this mean for passenger expectations? "In Europe and North America, low-cost airlines are considered a norm, and full-service airlines charging for food is also becoming accepted as the norm, simply because of the same passengers interchanging between the business models with a very fine line between the two," says Sukkhasantikul. "Such concepts will be unlikely to occur on full-service airlines in other regions, particularly Asia Pacific, where low-cost airlines are not yet mature."

So will practices from short-haul economy become acceptable in long haul, business or even first class? "Charging passengers for food on long-haul flights will only be reserved for the long-haul low-cost airlines," says Sukkhasantikul. "Charging for food in business- and first-class is very unlikely to occur. Even low-cost airlines like Air Asia and Jetstar provide meals free of charge in their premium cabin on long-haul operations."

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starturn

Michelin Star chef Marc Fosh reveals the rigours of working with Lufthansa and LSG Sky Chefs as part of the airline's renowned Star Chefs dining programme

ANTHONY JAMES, AIRLINE CATERING INTERNATIONAL

On a recent trip to Frankfurt to check out Lufthansa's exclusive first-class terminal, Airline Catering International caught up with Marc Fosh, who was in town at LSG Sky Chefs' headquarters to review the final presentation of his menu for the Lufthansa Star Chefs programme.

Q: WHAT'S YOUR BACKGROUND AND HOW WOULD YOU DESCRIBE YOUR SIGNATURE STYLE?

I've spent the last 20 years in Spain hence my philosophy and my kind of food is very, very Mediterranean. I don't cook with cream and butter and I try to keep things light and natural. I'm all about 'clean cooking' - clear flavours and simple presentation so people can actually see what they're eating. It's all very different from my classical 'French' training I undertook back in the UK and what I was doing when I first started in this business. I think you should try and look after your customers by making sure your food is healthy, light and enjoyable. That way they will keep coming back and won't die of a heart attack!

Q: HOW MANY DISHES ARE YOU PREPARING FOR LUFTHANSA?

The dishes I have created for Lufthansa are mainly taken from my 'Simply Fosh Restaurant' and the new 'Tasca de Blanquerna' menus, which both feature contemporary Spanish influences. We originally prepared and presented 32 dishes to Lufthansa, which we then scaled down to 21 dishes – 11 in first class and 10 for business class.

Q: WHAT WAS THE GREATEST CHALLENGE OVERALL?

The sheer scale of the programme – we have quite a small infrastructure as we are a 70-cover restaurant – so it was

mind boggling when we realised up to 600,000 passengers will get to taste our food on board! It's obviously a challenge to get the correct consistency across so many flights.

Q: WILL THE FOOD BE THE SAME AS THAT IN YOUR RESTAURANT?

No – if you're honest, that's impossible. It's not really viable for an airline and its catering partner to cook and prepare everything exactly the same as we can in the restaurant. There isn't a team of ten chefs on the aircraft preparing these dishes - instead everything has to be prepared in advance and obviously there's a big difference in how we plate up at the restaurant. Instead the aim is to ensure the flavours really come through so that passengers get a feeling for what you are about. In this sense the menu should convey the philosophy of the chef and where he or she is from and his or her particular flavour combinations. Hopefully it will give passengers a reason to visit next time they are in Mallorca and they can compare for themselves!

Q: WHAT WERE SOME OF THE CONSTRAINTS INVOLVED?

In Spain the pig is 'king' - there's lots of pork or ham but Lufthansa wanted to steer away from those ingredients. Fish, particularly shellfish, is also difficult to do well on an aircraft. So there were a few restrictions, but they were fairly easy restrictions once it was all made clear - you just sit down and start writing the menus and think about what you're going to do. Cost wasn't an issue in itself, although there were a couple of ingredients they asked us to avoid for this reason - caviar and oysters! The biggest cost is actually labour - so you always have to bear this in mind – for example, adding an







meet Marc Fosh

Marc Fosh is one of Europe's most exciting and creative cookery talents and one of Britain's most successful culinary exports. He began his career at the tender age of seventeen working at London's Greenhouse restaurant, before moving on to the Michelin-starred Chelsea Room at the Carlton Tower Hotel. In 1991 his passion for discovering new dishes led him to Spain where he became part of the Spanish resurgence onto the global, gastronomy map. Living and working in Spain he developed his own unique style of cuisine focusing on fresh ingredients and quality of produce, to which he adds a touch of inspired genius. The result is modern, yet simple cuisine with clean tastes complemented by depths of flavour and presentation. His cappuccino of lobster and coconut with caviar has been described by the London Evening Standard as "sex on a plate". In 2002 Marc become the first and only British chef to be awarded a Michelin Star in Spain. In 2009, Marc opened his own restaurant, Simply Fosh, located in the Hotel Convent de la Missio in Palma de Mallorca. The menu features authentic Mediterranean food with a modern twist. Marc's latest restaurant is Tasca de Blanquerna, which places a strong emphasis on local produce, organic ingredients and sustainability, and in doing so serves authentic Spanish dishes with a sprinkle of Fosh magic.

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Lufthansa Star Chefs

Since its inception in 2000, Lufthansa's award-winning Star Chefs programme has featured inflight creations by such culinary luminaries as Thomas Keller (New York/Napa Valley, California, USA), Paul Bocuse (Lyon, France), Daniel Boloud (New York), Santi Santamaria (San celoni, Spain), and Dieter Müller (Cologne, Germany).

Lufthansa will begin production of Marc Fosh's menus in November 2010. Passengers in first and business class on flights from Germany to nearly 200 international destinations will be able to sample some of his signature dishes, including sea bass a la Mallorquina, and chocolate and olive oil truffle with a red pepper-raspberry jelly.



orange segment has a far greater labour cost than the actual ingredient cost. It's not so much about the ingredients, it's the cost of how each meal is produced.

Q: HOW DOES THE PROCESS WORK?

LSG Sky Chefs sent a team to the restaurant where we presented our original 32 dishes. They then went away and worked on them to adapt them to the necessities of onboard catering. We then had a final presentation of the dishes at LSG's headquarters in Frankfurt, where we inspected the results and made a few adjustments where necessary. LSG is very experienced and I have been very impressed with the results – working with star chefs from all over the world helps LSG to grow and to get new ideas and to see different things. I'm now looking forward to actually going on board and tasting the food – that's the real test.

Q: HOW DO YOU COMPENSATE FOR A LACK OF TASTE AT ALTITUDE?

When I'm writing recipes and thinking about food for my restaurant, I try to incorporate at least three different senses upon first tasting: salty, sharp or sweet. I think that's even more important on an aircraft where a passenger's ability to taste is diminished. Otherwise it can get very one-dimensional and boring very quickly. Hence the chocolate and olive oil truffle we've included, which features just a little bit of salt on top to help jump your taste buds back to life and

WHEN I'M WRITING RECIPES, I TRY TO INCORPORATE
AT LEAST THREE DIFFERENT SENSES UPON FIRST
TASTING: SALTY, SHARP OR SWEET

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keep it interesting. At the same time there is no point having a menu where all the flavours are totally shocking and challenging to people.

Q: IS IT FAIR TO SAY YOU HAVE AN OBSESSION WITH SALT?

Well, yes, a little bit! A very long time ago I started to make salts for every dish that I had on the menu. So if I was doing duck with eucalyptus, I'd make a eucalyptus salt to accentuate the eucalyptus flavour; if I was making scallops with beetroot, then I'd make a beetroot salt to accentuate the beetroot, and so on. And then about 10 years ago I started working with a company in Mallorca that hand harvests the first layer of the salt crust. I add different flavour combinations to their salt and there are now a dozen combinations available commercially. For me, good salt and good olive oil are fundamental - if you have good olive oil and good salt, you're half way there. C

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Customisation is key for LSG Sky Chefs' customers

asyoulikeit

LSG Sky Chefs is carving a niche supporting airlines in developing new product and service concepts. Each project is based on the airline's specific needs and expectations, with a strong passenger focus. The results are unique products and services that drive differentiation.

Using a collaborative approach, dedicated LSG Sky Chefs' teams work with airlines to understand their position and needs, as well as bringing in consumer trends and research to help understand their passengers. All relevant stakeholders are brought together from the beginning, including, for example, marketing experts, crew and operations managers from the airlines, and account managers, product experts and designers from LSG Sky Chefs. The idea is that including the right people from the beginning not only ensures the best results, but reduces the need for adjustments further down the line.

Four main points are typically addressed during the development process – passenger experience, efficiency, differentiation and

crews. Passenger experience is a major focus as the company believes it is one of the major deciding factors for passengers in choosing an airline, especially within the premium sector. LSG Sky Chefs has a very wide portfolio of products and services, enabling it to consider the wider passenger experience, looking not only at service touchpoints on board, but throughout the entire journey. Projects can therefore cover diverse areas, including logistics, equipment design, equipment management, service concept design and optimisation, lounge concepts, food trends and more. Each project is unique, with the aims set specifically for and with the customer.

REDUCING COSTS

Saving money is often a priority for airlines. LSG Sky Chefs works to define target areas for efficiencies – which may include saving weight and space, reducing carbon emissions or creating a more efficient logistics network. The company has experience in achieving such efficiencies. For example it estimates

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improve fleet management.

LSG Sky Chefs has also developed a series of environmentally friendly equipment, which was awarded with the Stars of Observeur design award. When TAM Airlines was looking for a 'green' alternative to its disposable plastic equipment on international routes, these products presented the answer. The products are made of sugarcane, which is a non-tree, renewable and 100% biodegradable material (it fully decomposes in 60 days). They can be branded and tailored to individual needs, and the trays are stackable with smooth edges, helping to improve handling and enhance the overall appeal of the product. The new equipment was launched into service in April 2010.

Within the area of logistics, LSG Sky Chefs says SkylogistiX, its joint venture with Kuehne

+ Nagel, has already improved transparency and generated savings for airline customers. One example is TACA in Latin America, which wanted to reduce costs and improve the efficiency of its supply chain. Through the introduction of a sophisticated IT system, Skylog, as well as a reduction in regional hubs, SkylogsitiX was able to commit to continuous savings over a three-year period.

LSG Sky Chefs says that greater efficiency and improved service can also be achieved by optimising crew processes through the right equipment, or new service concepts. As the crew is an essential part of the customer's perception of service, the company includes them in concept development, and even offers a uniform design service.

Looking into the future, LSG Sky Chefs recognises several trends for each airline segment. In the premium segment it sees passengers taking more control, meaning that airlines may need to introduce more flexibility and individual choices. This could be reflected in offering different airport lounges before the flight, on-demand meal services without time restrictions during the flight, or personalised post-flight services at the destination.

Once the innovation process is complete, LSG Sky Chefs can support the airline in implementing the new concepts with a wide range of capabilities. This not only includes airline catering, but also logistics, equipment management, inflight management, airline lounges and other airport services.





The latest galleys and inserts from Sell reflect demand for upgrades in both form and function

winningformula

Earlier this year Sell announced a milestone – the delivery of its 40,000th galley unit, for an Emirates A380-800. The company delivered its first galley in 1955 for a Lufthansa Super Constellation. Sell says that one of the many changes in the intervening years has been an increased demand from airlines for customised, attractive galleys.

"The airlines' approach has shifted from pure practicality to a view that is also focused on 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 are only two examples of increasing customisation in this sector. Airlines want to integrate their corporate image and brand values into the design and styling of the galley, through the implementation of illuminated logos, invisible revolving catches installed behind trolley doors, or the use of roller blinds with logos."

Sell is also seeing increased demand for more visually attractive galley inserts. "The challenge is to combine form and function, delivering an attractive and elegant outer appearance and also building in increased functionality," says Just. "There is also a clear focus on weight for modern galley inserts. Additionally, sophisticated closing mechanisms, low touch temperatures, and

fast operating cycles all increase the ease of use so valued by cabin crew."

Bearing these requirements in mind, Sell recently unveiled its next generation of galley inserts, which should be available from the second quarter of 2011. The range includes ovens, coffeemakers, beverage makers, water boilers, and bun warmers, all with an elegant new look. The new oven is 6.5kg lighter, which Sell estimates will save customers approximately US\$6,500 (£4,169) on kerosene per oven per year. Safety features include an insulated tap on the water boiler, and automatic cut-off for the bun warmer. "Overheat protection is a given, and applies to insulated faucets, doors, and serving pots, maximising safety within the framework of the improved styling," says Just.

The range is available in ATLAS and ARINC versions. "It goes without saying that the next generation of galley inserts will not only need to comply with the new ARINC standards but also with the currently predominant ATLAS standard, to allow for downward compatibility within the existing fleet," says Just.

Looking to the future, Sell predicts demand for standardised and pre-certified galleys in the single-aisle market; in contrast to the twin-aisle market, which will call for social and lounge areas with full- or self-service bar units, or galley and bar combinations. \subset

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testingthewater

Flight-qualified water treatment technology has been around for 20 years. It's routinely installed on private jets, but not mandated in the world of commercial airlines. "When serving coffee, tea or just a refreshing glass of water to keep your passengers hydrated and comfortable, you should be able to trust the water in your galley," says David C. Fox, president and CEO of International Waterquard (IWG), a Canadian company specialising in water treatment for the aviation industry. "Royalty, heads of state and rock stars routinely travel in luxuriously appointed private jets and the water on those aircraft is almost certainly clean and safe for all uses, good-tasting and drinkable. This is not an assurance that the average airline passenger can have today."

The water quality on commercial aircraft issue came to a boil in 2002 when *The Wall Street Journal* published the results of its investigation of 14 flights. "Contamination was the rule, not the exception; almost all of the bacteria levels were tens, sometimes

hundreds of times above US government limits," the newspaper reported. This sparked an industry-wide study by the Environmental Protection Agency (EPA) in 2004, which found that one in six airliners failed to meet safety standards. A similar initiative was conducted in 2006 by Health Canada.

NEW LEGISLATION

The EPA responded with a new Aircraft Drinking Water Rule in October 2009. "An EPA study, related to the rule making, showed improvement," says Fox. "Now about 4% carry contaminated water, but with some 7,000 aircraft flying in the USA on any given day, that's still around 300 aircraft with substandard water, and of that group a dozen or more could have e.coli in the water."

"It's our view that clean, potable water for all customers and crew is a primary right, not a privilege and should be regarded by the airlines as part of standard service," says Kate Hanni, executive director and spokesperson for FlyersRights.org, a non-profit

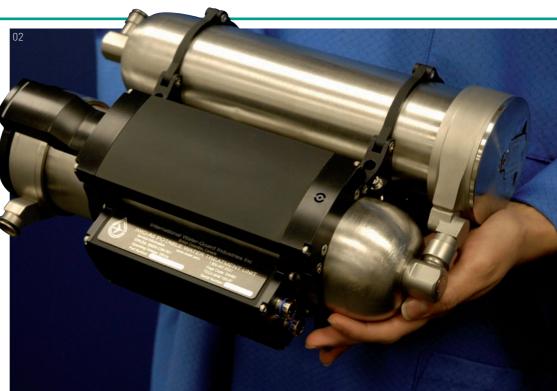
IWG believes the first airline to dip its toes into inflight water treatment will lead a revolution

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01. IWG's A4 water treatment unit02. The A6 model

airline consumer organisation headquartered in Napa, California, USA.

Flight-certified, lightweight technology is widely available and consistently upgraded to meet stringent standards. Companies like IWG provide ultraviolet treatment units or systems designed to ensure clean water, on demand, every time, at every point of use on board – in galleys and in lavatories.

Fox says airlines have to take into account all of the passenger types that might use the water supply from the galleys and lavatories – very young to very old, unsophisticated and sophisticated; not just the frequent flyer who knows not to brush their teeth in the lavatory.

There are environmental aspects to be considered as well. All those plastic water bottles present a lifecycle and disposal issue for airlines. "They must be purchased, loaded, unloaded and recycled or taken to the landfill – all costly endeavours for airline staff, and placing an additional demand on their increasingly scarce time, resources and management," says Fox. "Bottles also take up space in the galley and add weight – something all airlines are very conscious of in these days of high fuel costs and shrinking resources. In any case, providing passengers with bottled water is a stop-gap measure at

best in resolving the issue of high-quality water in flight."

Fox points out that airlines have to be aware of regulatory issues. "Airline water supplies are considered to be the same as any public water system and therefore subject to the same public health standards as any municipal system," he says. "Some airlines actually use the aircraft water supply as the source of all water delivered to economy-class passengers. In that case the 'public health' of the water is not just an academic concern."

So what impact are the new regulations having? "The new EPA regulations are more stringent and can cost an airline that runs afoul of the clean water requirements," says Fox. "When the water supply is found to be contaminated, there are specific steps the EPA requires, including notifying passengers, treating the water system on the aircraft, and if the problem is extensive, the aircraft may be taken out of service until the problem is resolved. This is very costly."

PUBLIC AWARENESS

Fox believes that the first commercial airline to adopt an onboard water treatment system will set the standard and benefit from a



valuable differentiator. "There is a heightened awareness among the travelling public about airline cabin hygiene. Passengers and crew are very conscious of air and water quality and more demanding of amenities while travelling – far more than ever before," says Fox. "It will be a very smart move in response to the heightened market demands of travelsavvy customers. The airline that offers passengers the opportunity to brush their teeth with confidence will have found another important tool to increase their market share." C







Bored of traditional meal trays, Quodpod designed an alternative

boxingclever

UK-based Quodpod has taken up the challenge of refreshing aircraft cabin catering, while generating space and weight benefits for airlines. "We wanted to totally rethink the airline meal, to bring back the fun and surprise," says Katie Davidson, managing director of Quodpod. "It was also important to us that we minimised the volume of disposable packaging which is neither appetising nor sustainable."

Replacing the traditional tray and dish format, the company's eponymous solution is a pod with a dual-axis lower tray that swings out from one side and then the other, so passengers look at each course separately, rather than all at once. The company says this has the added benefit of providing the passenger with much more elbow room during the meal. Once the meal is finished, the pod folds up with all the mess inside and allows passengers to regain their personal space, rather than having to wait for the crew to clear the cabin.

While many airlines have had to reduce their innovation budgets in recent years, the company says that Quodpod can actually help to save money. The pods are compact – 42 can fit in one ATLAS cart, helping to free up room in the galley for duty free and other revenue-earning items. "Furthermore, the

pods are so simple to put together that caterers will also see a benefit, with fewer personnel needed to assemble each meal," says Davidson.

The pods can be branded by each airline, using livery colours and a prominent logo on the lid. Colour combinations could also help to differentiate special meals or be used to attract young fliers with bright hues and engaging characters. A recent focus group held by the company in London with children and their parents indicated that the Quodpod could be used successfully on board as a childrens' product. "The children loved the way they could explore their meal course by course, and commented on how they liked the 'personal, cool' design," says Davidson. "Parents, on the other hand, focused on how the pod's insulated hot dish would prevent burns. They also discussed how it would entertain the children during the meal, giving them a few minutes of peace and quiet!'

The company envisages the Quodpod being used by both full-service airlines and their low-cost counterparts. "The pods offer an excellent buy-on-board or even pre-board sales opportunity, upselling passengers to a three-course pick 'n' mix meal, and giving them the opportunity to buy their picnic box as a souvenir," says Davidson. \square

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PRODUCTSSERVICES



An alternative to glass wine bottles that could save weight, space and energy drinkup

According to Ratcliffe & Brown Wines & Spirits, an airline could save 35-45% of the weight currently involved in flying wine and gain about 15-20% space in a bar cart, by a simple change from glass to multilayer polyethylene terephthalate (MLPET) bottles.

"MLPET is an immensely strong, inert, food-grade polymer widely used in the food and drinks industry. It is approved by international regulatory bodies for use with food and alcohol, 'taint' free and extremely safe," says David Ratcliffe, joint managing director of Ratcliffe & Brown Wines & Spirits, a UK-based wine merchant for the travel catering industry.

The MLPET bottles, which are recyclable, feature a layer of nylon sandwiched between two PET layers. The company says that the layers are 5.5 times more effective at blocking oxygen transmission than standard monolayer PET bottles, thus lengthening shelf life. "Because MLPET bottles have a thinner wall, they take up 20% less space than glass. They are also virtually unbreakable," says Ratcliffe. "As a result, 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 on the ground. "A typical 9-litre

case of MLPET wine bottles in a lightweight carton with no dividers weighs around 11kg, whereas a case of glass bottles in larger, necessarily heavier cartons plus dividers weighs approximately 21kg," says Ratcliffe. "Twenty four more cases of 12 75cl wine bottles can be stacked on a standard pallet (or 624 more cases in a 40ft trailer), for less allup axle weight, and fewer delivery journeys."

Ratcliffe & Brown Wines & Spirits offers 75cl and 100cl MLPET bottles (filled by Paul Sapin in France) for onboard pouring, as well as a 187ml unit for single serve. The company says that because of the reduced wall thickness, when filled, the 1-litre MLPET wine bottle is almost exactly the same size as a 75cl glass bottle, but weighs less and carries 33% more wine. In addition, a new deepskirted tamper-evident screw cap made from high-density polyethylene is now available, making the MLPET bottle and cap 100% recyclable without the added cost of having to separate a metal cap from the bottle.

"MLPET bottles are indistinguishable in appearance from 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 get off the ground."

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01. Members of Monogram's engineering team

02. The steam oven

nge of entary allinclusive

Monogram Systems is developing a new suite of galley inserts designed to meet the major commercial aircraft OEMs' seller furnished equipment (SFE) requirements. "This marks the first time that the airframe manufacturers are creating full specifications for galley inserts," says Stephen Zimmerman, president of Monogram. "Monogram has directed its engineers to not only meet the required specifications, but to strive above and beyond with added features that include breakthrough technology."

Monogram, a Zodiac Aerospace company, is now well into the design of the inserts. The range of complementary products will include a convection oven, steam oven, microwave oven, beverage chiller, coffeemaker, water heater and trash compactor. The company aims to revolutionise flight attendant efficiency, reliability and the dining experience. "We have some of the brightest minds and most experienced design engineers focused on creating a truly unique blend of products," says Zimmerman. "Because Monogram is an SFE systems supplier, we are able to apply a rigorous design and development process that raises the bar of galley insert design to a level never achieved before.

Monogram has appointed a dedicated team of engineers to each product within the range, rather than taking a general approach where everyone addresses all aspects. This makes it possible to capitalise on specialised skills and create a more sophisticated system that integrates every element strategically.

Fred Reed, director of engineering at the company, says that testing for these galley inserts is the most extensive ever. They have been designed so that each works with the others to create a complete, interconnected system. "We have taken a clean sheet approach to our engineering, not limiting ourselves to modifying something that already exists and trying to make it work," says Reed. "As a systems supplier, this has always been a Monogram strength – building components that work as a fluid composition, rather than as individual, unrelated parts. We are also leveraging our electronics and software expertise with an integrated galley controller that will control and communicate with both our products and those of other galley equipment suppliers."

The product suite will be available in both ARINC and ATLAS standards. The preliminary design review has already been completed, and the critical design review is scheduled for early in 2011. "The system will combine durability, reliability, a sleek uniform look, low power consumption and weight conservation," says Gene Zipp, vice president of sales at the company. "The design allows for a great deal of flexibility and maximises airline operating efficiency for superior performance."

A new range of complementary inserts for the entire galley

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betterallround

In light of increasing passenger numbers and the consequences this has for operational aspects, the E-Cab research project was set up with the aim of optimising the entire flight process. Following its participation in the project, Bucher has launched a new galley designed to meet future market requirements.

E-Cab stands for electronically enabled cabin and associated logistics for improved passenger services and operational efficiency. The project was originally initiated by Airbus Industries and put out to tender by the European Commission as part of the sixth European Framework Programme (FP6). A total of 31 industry and research partners were involved. Working together they set about developing individual solutions that could be synchronised to achieve the desired benefits in all phases of the travel process from ticket sales through to the actual flight, and ultimately arrival at the destination. A further aim was to reduce the costs of aircraft development and operation.

To achieve these ambitious goals more easily and manage the complexity of the project work, E-Cab was broken down into four interconnected sub-projects – Passenger Services, People Moving, Freight Handling, and Catering Services.

As a major galley manufacturer, Bucher Leichtbau was involved in the Catering Services sub-project, which focused on issues such as how to integrate radio frequency identification (RFID) and ergonomic handling into a complete system. Project aims included enabling the end-to-end integration of all catering-related passenger information across the entire journey. Another key aim was to increase the productivity and efficiency of the crew in loading the galley and trolleys, and ensuring that only what has been ordered is taken on the flight, to save weight. The concept is based on pre-ordered food and drink, to ensure the needs of the passengers are correctly met. The company also had to ensure the retrofit capability of structural elements such as the galley, and the usability

Bucher Leichtbau's involvement in the E-cab logistic optimisation project resulted in a new galley

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of new and old inserts in the redesigned galley; as well as improve ergonomic functionality, for example by incorporating adjustable lighting for optimal adaptation to light conditions.

Bucher Leichtbau says that it found solutions to all of these issues in creating its new galley. "Firstly, the aluminium design proved ideal in terms of RFID shielding, and did not allow emissions to penetrate into other compartments," says Daniel Marti, galley sales director at the company. "The concept allows the problem-free integration of various RFID elements such as antennae, transmitters, etc, and has made RFID-supported logistics processes a reality."

IMPROVED PRACTICALITY

The new galley also includes elements for optimising ergonomics, for example a solution for the clean integration of LED lighting units, as well as an extending table that can be pulled out with one hand. "The table extends in a single piece across the entire width of the galley, offering seamless and infinitely adaptable practical advantages in cleaning and maintenance," says Marti. "This multifunctional table solution offers

high cost efficiency to the customer." Another example of this focus on ergonomics is the use of aluminium roller shutters instead of compartment doors.

As a result of developing these features, Bucher Leichtbau is now able to supply the market with a galley that is completely RFID compatible, and designed for enhanced utility in high-density operational practice.

In addition to the direct benefit of being able to integrate elements such as the improved ergonomics into its new customer projects, E-Cab also provided Bucher Leichtbau with further valuable knowledge. "In structural terms the Bucher Leichtbau galley design has proved itself as a solid and totally future-oriented basis for the new concept, which offers great flexibility and provides the customer with a certain amount of investment protection, as it promises compatibility with existing elements," says Marti. "The customer can therefore introduce the new equipment in stages, which reduces cost pressure, and still profit from the additional benefits that the new technological concept brings."

In business terms, Bucher Leichtbau has been able to demonstrate its capabilities as a

systems integrator. From its base in Falländen, Switzerland, the company acted as overall coordinator of the Catering Services sub-project, which entailed meeting an extremely wide range of market demands and requirements. C



02

- **01.** The new galley incorporates RFID
- **02.** The galley features a wide, multifunctional extending table







spreadtheword

For many years IDB Deutschland has served US-based airlines such as Continental, American and Delta Air Lines with Kerrygold Original Irish chilled and frozen butter portions, through its sales partner AMI Inflight.

The Kerrygold branded butter is available in 10g and 15g portions, for exact cost and portion control. The butter is portioned out and shock-frozen using a special process. The portions are not individually wrapped. When required the butter is then taken from the freezer for immediate use. IDB promises that all portions will hold their shape throughout the service for an attractive and appetising presentation.

The company also says the product is environmentally friendly, as the portions are not wrapped, and are suitable for conveyor belt systems. "These unique butter portions can be used in a variety of ways in large-scale food preparation by the hotel and catering industries, whilst ensuring optimal

cost control, reduced packaging waste and high customer convenience, as there is no need to scrape the butter from the foil," says Patricia Kief, marketing manager at IDB.

The 10g and 15g portions are available in three flavours – unsalted, lightly salted and with fresh herbs. They come in three shapes and styles – rosettes (flower shaped), golf balls and footballs. The company also offers delight, a 60% fat version, and chilled mini dishes that are 1.7cm (0.4in) in height.

BRAND VALUE

"Kerrygold is synonymous with excellent product quality. The butter is made using only the best milk from selected Irish dairy farms, where the mild climate enables cows to graze on open meadows nearly all year round," says Kief. "This means that the cows enjoy the best possible feed – namely fresh, rich meadow grass – resulting in an excellent quality milk, and contributing to the excellent aroma, easy spreadability and golden colour

IDB Deutschland
is bringing a
well-known brand
into the cabin
with individual
butter portions
and cheeses

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01-02. The butter is served in 10g and 15g portions

of the Kerrygold butter, which is made with no added ingredients."

CHEESE PLATE

Kerrygold Catering has also extended its product range with two grated cheeses – Irish Mozzarella and Irish Red Cheddar. Both varieties are individually quick frozen like the butter, which increases their shelf life, and makes them suitable for exact dosing. "These new grated cheeses have excellent melt properties and give an attractive appearance, as no anti-caking agents, offcuts or rinds are used," says Kief. "These high-quality Irish cheeses guarantee great taste and appearance."

The mozzarella is particularly suitable for Italian dishes such as pizza and lasagna, while the company says the cheddar offers a mild, nutty flavour. Both cheeses are available in 10kg cartons (10 bags of 1kg).

IDB Deutschland is a subsidiary of the Irish Dairy Board, which has supplied dairy products internationally for over 40 years. Its portfolio consists of retail consumer products under the Kerrygold brand and specialised ingredients. The board markets its products in more than 90 countries. \subset





Brand benefit

Kerrygold Pure Irish Butter ...



... in branded chilled mini-tubs.

Kerrygold is synonymous with excellent product quality. The mild Irish climate enables the cows to graze on open meadows and enjoy the best possible feed – namely fresh, rich meadow grass. This results in an excellent quality milk, and contributes to the unique pack for economy class inflight catering.

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WHAT ARE THE MAIN CHALLENGES FACING THE INDUSTRY

TODAY? Increased cost of doing business is the main challenge, including rising fuel prices and increased competition.

WHAT IS IFSA'S ROLE IN THE AIRLINE CATERING

INDUSTRY? IFSA is a global professional association created to serve the needs and interests of the airline and railway personnel, caterers and suppliers responsible for providing onboard services on regularly scheduled travel routes. IFSA's membership is dedicated to the advancement of the art and science of the multibillion dollar inflight and railway onboard services industry.

IS THERE ENOUGH UNDERSTANDING BETWEEN AIRLINES, CATERERS AND MANUFACTURERS AS TO EACH OTHERS' CHALLENGES? Industry conferences, such as the IFSA Annual Conference & Exhibition, provide an opportunity for these three groups to exchange ideas and share solutions. The industry evolves at a rapid pace, so it's essential to evolve with it. IFSA is committed to hosting annual events that provide educational opportunities with industry leaders who cover today's most pertinent topics.

HOW IMPORTANT IS TRAINING? Training is a key initiative within IFSA. Since IFSA's inception, there has been a standing Government Affairs and Education Committee, the primary focus of which is to provide information, guidance and education to IFSA's members regarding food safety and security.

HOW HAS THE ONBOARD FOOD SERVICE INDUSTRY
EVOLVED IN RECENT YEARS? One of the most significant innovations is the buy-on-board concept. This has truly revolutionised the airline meal experience and provides the customer with choices that were previously unavailable in flight, as well as providing airlines with new sources of ancillary revenue. Although customers took time getting used to buy on board, they soon recognised that this concept provided additional value and appeal over traditional meals that airlines historically provided – customers now have control over what they eat and when they eat it. Buy-on-board is here to stay.

HOW CAN AIRLINES MAKE MORE MONEY FROM ONBOARD FOOD SERVICE? With the advent of the buy-on-board concept, airlines are now positioned to tailor menus according to consumer preferences, which will help control costs, reduce waste, and satisfy the discerning customer. The good news is that customers have choices with a la carte offerings.

CAN TECHNOLOGY PLAY A BIGGER ROLE IN REVENUE GENERATION? Absolutely. Technology tools that optimise inventory management through the supply chain are driving efficiencies and productivity improvements that result in reduced costs for the airline and a better experience for customers.



Vicky Stennes, president of the International Flight Services Association (IFSA), and vice president of inflight experience at JetBlue Airways, on the challenges and opportunities facing the industry



HOW CAN AIRLINES, CATERERS AND MANUFACTURERS

MAKE THEIR OPERATIONS GREENER? The majority of our

member companies have green initiatives in place and are continually evaluating additional areas in which they can make environmentally sound business decisions. At JetBlue, we believe it is our social responsibility to reduce our impact, volunteer our services, and educate ourselves and others. We have enhanced our green purchasing policies including our supply chain procurement process, and yearly we encourage our crew members and customers to 'do one thing that's green' through volunteering and changing daily practices.

WHAT TRENDS DO YOU EXPECT TO PLAY A GROWING ROLE IN THE INDUSTRY? The continued trend is to provide a personalised customer experience, including healthier menu choices, signature beverages, and the customer's ability to tailor their inflight experience. In addition, we are seeing WiFi connectivity, live TV, onboard gaming and other entertainment options that optimise the customer experience.

personal tastes

1. WHAT WAS YOUR BEST INFLIGHT FOOD EXPERIENCE?

I recently flew to Colombo, Sri Lanka, on SriLankan Airlines, where I was thoroughly impressed by the flight attendants' personalised service and their attention to detail.

- 2. WHAT HAS BEEN YOUR WORST INFLIGHT FOOD EXPERIENCE? When an airline has run out of my favourite food or drink.
- **3. DO YOU CHOOSE AN AIRLINE BASED ON ITS FOOD SERVICE?** If I am faced with a choice of two airlines on which to fly, I will choose the one with the best overall customer experience.
- **4. WHAT WOULD BE YOUR DREAM INFLIGHT MENU, AND WHO WOULD COOK IT?** A simple Maine lobster dinner prepared by Tyler Florence, with a nice glass of un-oaked Chardonnay.

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Airline Catering

In-flight Equipment and Logistics

In-flight Management

Airport Services





LSG Sky Chefs' broad range of products and services is designed to offer you, and ultimately your passengers, a unique experience. We know that every airline is an individual, and we therefore customize our offering to suit your specific needs.

This may be by designing tailor-made in-flight equipment to enhance your passengers' brand experience, introducing lightweight trolleys to your fleet to reduce fuel-burn and carbon emissions, or optimizing your supply chain to improve costs, for example.











