Hotels 2020:
Beyond Segmentation

Strategies for growth in an era of
personalization and global change

Fast Future
Accelerating Innovation

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Contents

1. Foreword

Think like your guest

Unique, connected, informed: these are just three watchwords that will define the hotel guest, both today and in the future. Understanding a customer is a strategic imperative for hotels in today's world.

We are operating in an era of unprecedented change. Brands that don't recognize and respond to this run the risk of falling behind the competition permanently.

Nonetheless, change requires bold decisions. Change requires bold actions. Change requires hoteliers to think in different ways. It is no good just to think about how hoteliers deliver services better or how to market more effectively. Hoteliers have to fundamentally think about the services they offer and how they relate to the future guest.

At Amadeus, we are determined to stay ahead of this change. And we are as determined to help our customers stay ahead of this change too.

However, thinking from a business perspective, it will require all of us to think about our businesses, not just as hospitality professionals, but as if we are guests. This will require us to challenge conventional thinking about how we sell, market and interact with guests. The winning brands will be those that can best meet the needs of the guest of the future.

At Amadeus, we are curious about the future. We want to understand and make sense of the future. We hope that this report provides an opportunity for us all to think about the future of the hotel guest. A future that won't be defined by past behaviors, preferences or habits but a future defined by how guests themselves will want to shop for, buy and experience travel.

However, the danger in such a fragmented world is to think of customers as segmented groups as we have in the past. Instead, this report recognizes that guests no longer fit into the clean segments of yesteryear. Each guest will have their own preferences, demands and characteristics. The challenge for hotels is to understand and act upon these. This is why we have called the report Beyond Segmentation. What we hope to achieve with this paper is to get us all thinking about how we can meet the needs of future guests. By developing a model of 'service spectrums' we are closer to thinking beyond the obvious and no longer expect to continue as we were.

We hope you enjoy reading this report and we hope you also respond to some of the insights with your colleagues.

Jérôme Destors
Director, Hotel IT, Amadeus

2. Executive summary

Amadeus has commissioned Fast Future Research to undertake a study on the drivers of change for the globally branded hotel sector over the next decade and the resulting implications in terms of hotel strategy, brand portfolio, business models, customer targeting and innovation.

As hoteliers emerge from the recent economic downturn and start developing strategies for the next decade, it is critically important to scan ahead and understand the key external drivers of change and emerging opportunities that could be shaping the agenda for the hotel sector. It is clear that the decade ahead will be characterized by megatrends that promise economic uncertainty, a potentially massive shift in wealth from West to East, transformational advances in science and technology and rapidly evolving needs and expectations of the individual consumer. This report is designed to provide a rapid scan of those drivers and offer critical insights on the potential implications and opportunities for the hotel sector.

The report draws on a combination of desk research, expert interviews (see section 7 for list of interviewees) and a global survey on future strategies and business models for the sector. The survey received a total of 610 respondents from around the world, of whom 42 per cent work in the travel industry. The survey posed a range of scenarios relating to hotels in 2020 and asked respondents to rate whether they strongly disagreed, disagreed, agreed or strongly agreed with the statement.

The study evaluated a number of drivers and focused in particular on those shaping the global context and environment for hotels and their guests, the needs of tomorrow's traveler, business transformation within the hotel sector and emerging developments in technology and connectivity. The assessment of opportunities and implications for hotels focused on developing strategy in an uncertain world, management of the brand portfolio, evolution of business and revenue models, location and categorization in the era of personalization.

The growing focus on personalization of the hotel experience has given rise to the concept of moving beyond segmentation models towards the introduction of service spectrums in which the guest is given choice over almost every aspect of their hotel experience. The possible components of such a spectrum are discussed. Finally a framework is presented of key challenges for leaders as they map their path to Hotel 2020.

Hotel 2020 - Key characteristics of successful players in tomorrow's world
Some key insights arise from the research about the characteristics, nature and capabilities of the successful global hotel brand of the future:

1. An organization capable of surviving and thriving in turbulence and uncertainty
The path of the economy and hotel market over the next ten years is uncertain. We have to prepare for a range of possible future scenarios. This implies development of leaders, managers and staff who are curious, tolerant of uncertainty, capable of scenario thinking and willing to make decisions with imperfect information.

2. A portfolio of strategies for an evolving marketplace
In response to differing rates of growth and development, hotel groups will increasingly adopt a portfolio approach to strategy with a range of different goals and approaches being pursued in parallel within different geographies and market tiers. An increased use of co-branding with well known consumer businesses is expected, along with the emergence of unbranded hotel groups providing 'white label' services to hotel owners. Greater experimentation with business models is expected – with a proliferation of auction based models, low cost airline style pricing and a growth of 24 hour rental models replacing the fixed night option.

3. Deep understanding of an increasingly geographically, financially, generationally and attitudinally diverse and rapidly evolving customer base
There is a clear expectation of a growth in tourism from the emerging markets although it's by no means clear how profitable that business will be. At the same time the fallout from the financial crisis could see an even broader spectrum of customers and diverse needs from established markets. Traditional segmentation models will no longer suffice as we try to capture the needs and nature of tomorrow's traveler.

4. Delivering a personalized experience through a wide spectrum of service choice
Customers will increasingly demand choice over every aspect of their hotel stay – encompassing check-in and departure, service levels, the size of the room, decor, the furniture in it, the audio-visual facilities, amenities and food and beverage options.

5. Immersive, tactile and multi-dimensional technology interfaces
Generation Y and those that follow them are coming into the hotel as both guests and employees with a very different relationship to the technology they use. For them the boundaries between the physical and virtual world have blurred and the range of ways in which they'll interact with their data will be far more visible and tactile than anything we've experienced to date.

6. Open, listening, collaborative and experimental approach to innovation
Hotels will increasingly adopt best practices from other parts of the business world and start to integrate the customer and other business partners into their innovation processes by using techniques such as open innovation and crowd-sourcing.

7. Continuous search for ancillary revenue streams
A range of approaches will be considered to increase revenue generation including discount offers to capture a share of pre- and post-trip travel spend, introduction to the hotel's own branded goods catalogue and extension of the range of business services provided.

8. Connected, adaptive and predictive
Tomorrow's hotel will be far more embedded in the internet, playing an active role in social media and using it to highlight the changes on the horizon. Internally, a greater emphasis will be placed on flexibility to respond rapidly to a changing environment. New advanced analytical techniques and software tools will be adopted to help anticipate future patterns of demand.

9. Asset light, insight rich
With a focus on becoming lean, flexible and responsive, hotel groups will continue to shed their fixed assets and develop innovative financing models for hotel investors. Analysts will increasingly start to value groups on the depth and quality of their market insight and their understanding of emerging drivers of change.

10. Continuous evolution – the hotel as a living laboratory
Hotel groups will increasingly view themselves as being in a constant state of experimentation – with the individual properties acting as living laboratories for the development and testing of new ideas. Every customer interaction could be viewed as a potential source of feedback, new ideas and competitor insight.

3. Drivers of change

This section explores critical global drivers that are shaping the operating context for hotels and their customers in the next decade. While there are a wide range of drivers that could clearly have an impact we focused on four key clusters of drivers in the discussion below:

Global context
Key developments shaping the customer's operating environment and the impact for hotels

Tomorrow's traveler
Persistent, emerging and potential needs and behaviors of tomorrow's hotel guest

Business transformation
Trends in innovation, design and strategic thinking within the hotel sector

Technology and connectivity
The wired world of guests, bedrooms, staff and management in Hotel 2020

3.1 The global context

Starting assumptions

In the next decade, the global context will be shaped by many factors; we have selected a few we consider of prime importance to hoteliers. We have also made some starting assumptions about other key drivers to help frame our analysis:

> **Politics and security –** Geopolitical tensions, country failures, terrorism and reshaping of geo-institutions

> **Energy –** Rising demand, hesitant investment and a slow transition to alternatives - causing price hikes

> **Infrastructure –** An uneven pattern of global investment – exerting influence on hotel development plans

> **Aviation –** Further restructuring and consolidation in the search for sustainable business models

> **Space tourism –** Commercial spaceflight takes off – but we won't see space hotels by 2020

> **Future eco-shocks –** We'll experience regular natural and climatic disasters and health pandemics.

Reshaping the economic landscape
Economic power shifts are forcing hoteliers to think about the geographic source and potential profitability of future revenue streams over the next decade.
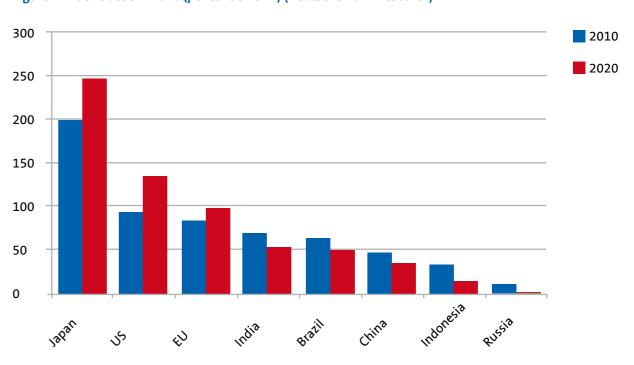
The key challenge is learning to prepare for a range of possible scenarios as there is clearly still significant risk left in the system and the knock-on impact to other sectors is still occurring – with the public sector one of the last to feel the effects. The full costs and impact of the global financial crisis may take longer to assess, but the estimate so far is of a total of $20 trillion in bailout funding, stimulus commitments, guarantees and increased spending by governments worldwide[1]. Perhaps more importantly for the longer term, we have become far more aware of the scale of exposure and the size of risk resident within the system. The biggest single source of risk is posed by the scale of derivative contracts in circulation – estimated at $700 trillion at face value – roughly 10 times the size of the global economy[2].

At the same time, the crisis has helped accelerate an 'Eastward Shift' in economic power that was already in evidence. Since 1995 Asia's real GDP has grown at over twice the rate of America or Western Europe[3]. In many cases the emerging economies have come through the crisis with more robust banking systems, a lower exposure to derivatives and lower levels of debt (Figure 1).

Among the world's largest developed economies, public debt is forecast to be an average of 118 per cent of GDP by 2014 – up from 78 per cent in 2007[4]. While the scale of sovereign debt is becoming clearer, what is less obvious is how deep the potential government spending cuts will be across these economies and what impact they will have on business and consumer spending. There is rising expectation that many economies could experience further downturns over the next decade. The net effect for the hotel sector is that it will be very difficult to forecast future revenue streams with any accuracy and hoteliers will have to plan for a range of possible future economic scenarios rather than a single stable set of growth assumptions.

Figure 1 - Public debt in 2020 (per cent of GDP) (Deutsche Bank Research)[5]

The Economist Magazine[6] estimates that (i) by 2014, on a purchasing power parity (PPP) basis, Asia's share of the world economy should exceed that of America and Europe combined; and (ii) by 2020 Asia could deliver 50 per cent of total sales and profits for some Western multinationals, compared to 20-25 per cent in 2010. Ernst and Young[7] forecasts that the BRIC nations will contribute 40 per cent of global economic growth in the decade from 2008 to 2018 while others suggest that even with a recovery in the developed world, emerging markets will deliver 70 to 75 per cent of global growth every year for the foreseeable future.[8]

While Asian growth offers an important new source of customers, we can't just assume they will be willing to pay the same rates as their western counterparts. In our survey, 70 per cent agreed that there will be a rise in Asian middle class travelers who will be extremely cost conscious and drive down prices.

A possible double-dip and lack of economic confidence will impact the demand for travel. A deflationary world economy would stifle the industry since we are an experience economy dependent on discretionary income.
Ian Yeoman
Associate Professor of Tourism Management at Victoria University

Indonesia is a sleeper – a continued stable government will catalyze it. It's a difficult market as it's very heterogeneous, but I think it will surprise many people.
Peter de Jong
Former CEO, PATA

Globalization of business

Despite setbacks during the downturn, there are strong drivers that should help increase the volume of business travel over the next decade.
The growth of multinationals from emerging economies and developed economy businesses seeking out opportunities in developing nations will both drive an increase in demand for hotel rooms. At the same time, the push to create new cities across the Middle East and Asia in particular will lead to up-front demand for hotels to house the professionals involved in such developments.

Talent

The ability to attract, motivate, develop and retain sufficient talent will be a key success factor.
Despite the downturn, industries across the globe are facing the prospect of a growing talent shortage as baby boomers retire and insufficient numbers of skilled workers come into the economy. As of August 2010, the World Travel and Tourism Council (WTTC) estimates that travel and tourism employs 235 million people worldwide and that this will grow to 303 million by 2020[9].

In a Manpower 2010 survey, 'restaurant and hotel staff' was ranked 6th in terms of the size of its talent shortage in the U.S., 7th in China and 9th in the UK[10] .

A poor corporate culture amongst larger firms may drive talent to more innovative firms such as Joie de Vivre. Leveraging best talent will still be critical. Unless you have people with foresight and knowledge, technology will not be a differentiator.
Susan Black
Founding Partner, Black & Wright

Regional economic co-operation

Intra-regional travel could be an increasingly important source of new business in the next decade.
In the post-crisis era, a growing emphasis is being placed on increasing all forms of trade within regional trading blocs such as ASEAN, the European Union and the Gulf Co-operation Council (GCC). Promoting intra-regional tourism has been targeted by ASEAN[1] as part of a project to improve the region's commercial competitiveness and create a fully integrated economic community by 2015[11]. Similar initiatives are also underway in Central America and in Europe with the Calypso Social Tourism program. Hence, competition to attract regional travelers and have them stay 'on continent' will increase. 82 per cent of all survey respondents and 77 per cent of those in the travel industry agreed or strongly agreed that 'city or country based alliances are likely, resulting in preferential marketing / pricing of certain destinations'.

Trading blocs such as ASEAN may open the way for freer movement.
John Koldowski
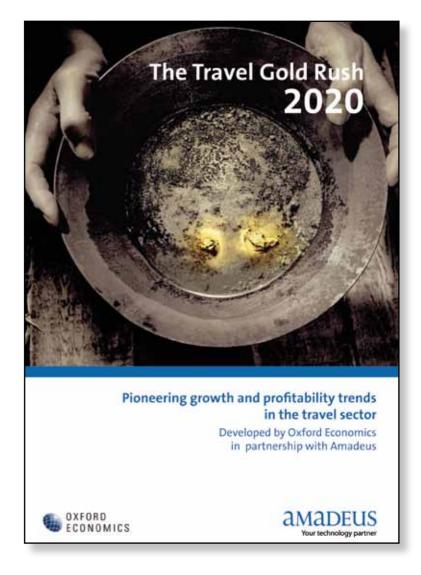Director of Strategic Intelligence, PATA

Visa regimes

The removal of travel restrictions is critical to the attraction of guests from emerging markets in particular.
Hotels may have to play a more active role in helping guests secure visas in order to remove hurdles to attracting customers from the emerging markets. Almost all countries now require visas from certain non-nationals who wish to enter their territory[12]. The 2010 Henley Global Visa Restriction Index shows UK passport holders can enter the most countries (166) visa free while Indian and Chinese passport holders can only travel without visas to 50 and 38 countries respectively. In June 2010, Israel recognized the challenge of attracting key Chinese tourists by easing visa applications for organized tour groups from the main Chinese cities[13] . In our survey only 56 per cent of all respondents and 51 per cent from the industry 'expected a relaxation of visa regimes to attract visitors from emerging markets and BRIC economies' by 2020.

Reorientation of global markets

What proportion of the new Asian travelers over the next decade can the branded hotel sector attract and at what price?
IATA reports[14] that for 2009, of the 2.2 billion airline passengers worldwide, 647 million originated in Asia, against 638 million in North America. By 2013, 217 million more are expected to fly within Asia – giving the region roughly a third of the global market. In the U.S. there are three aircraft seats per year for each of the 300 million people who live there. China's has 0.3 seats for each of its 1.3 billion people, while India's has only 0.1 seats per head for its 1.1 billion. Should Asians ever travel at the same rate as U.S citizens, this would triple global passenger numbers[15].

In Travel Gold Rush 2020, a report developed by Oxford Economics for Amadeus in September 2010, it suggests that looking forward to 2020, Asia will account for one third (32 percent) of global travel spend, up from only 21 percent today, which represents a dramatic realignment over the next ten years.

As these travelers are likely to have a different wealth profile and spending capacity, competition will emerge to win their business. Even if they do want to stay in globally branded hotel chains, many may not be willing or able to pay the kinds of rates currently enjoyed by the sector. In the survey, 79 per cent agreed that by 2020 'heavy investment in emerging tourism markets will widen traveler choice, increase competition and potentially drive down prices and profit margins across the spectrum of hotels'.

The Travel Gold Rush 2020

Pioneering growth and profitability trends in the travel sector

Developed by Oxford Economics in partnership with Amadeus

OXFORD ECONOMICS

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Sustainability

In the face of growing concerns about borrowing consumption from future generations, the sector is under increasing pressure to prove it is driving down its environmental footprint and developing truly sustainable operations.
Tom Rowntree of InterContinental Hotels Group (IHG) says the average European hotel produces 3000 tons of carbon dioxide emissions per year while the equivalent in Dubai produces 6500 tons[16]. The capacity to identify and leverage best practices across a global portfolio offers a major opportunity for hotel chains. In the survey, 83 per cent agreed that by 2020 'environmental considerations will play an increasing role in the choice of business and leisure hotels'. Despite the concerns, there are clear reasons for optimism as across the industry, significant advances are being made to reduce its ecological footprint, for example:

> Hotel 1000 in Seattle Washington has a Guest Sensor which detects when the room is empty and adjusts heating and lighting accordingly while alerting service staff to clean the room[17].

> The Crowne Plaza close to the Oresund strait that separates Denmark and Sweden has an 86-meter (232-feet) concrete and steel tower covered in around 1,500 solar panels, producing 170,000 kilowatt-hours of electricity annually, which can power 55 households. In the tower's basement, a geothermal well serves the hotel's heating and air conditioning needs, reducing its energy bill by about 90 percent. The 366 rooms have water-saving taps, low-energy light bulbs and biodegradable amenities[18].

> Guests using the gym of the Copenhagen Crowne Plaza can earn a meal voucher worth about $36 by producing at least 10 watt-hours of electricity on an exercise bicycle connected to a generator -- typically equating to around 15 minutes' of activity[19].

> Botswana won the Tourism for Tomorrow 2010 award for its destination stewardship[20]. The country has a clear 'low-volume - high-yield' strategy, with conservative limits on bed and vehicle density. The question is whether other destinations will adopt a similar stance and what impact that will have on the business models and strategies for hotel operators in these locations.

> Emirates Hotels & Resorts received the Tourism for Tomorrow Conservation Award at the 2010 World Travel & Tourism Council's (WTTC) Global Summit, in Beijing. Emirates' first resort, Al Maha Desert Resort & Spa in Dubai, was designed and built on principles of environmentally sustainable development. This know-how has been applied at the new Wolgan Valley Resort & Spa in Australia - the world's first hotel certified as carbon neutral by an internationally accredited organization[21].

> *Hotels have diminished their environmental impact – they deserve to be complimented and they are in general great at operations.*
> **Peter de Jong**
> Former CEO, PATA

> *Environmental rules will be mandatory across the board. Carbon offsetting will be a huge part of the ticket. When tele-presence is a viable option then that will be huge, people will ask - do I really need to travel for this two hour meeting?*
> **Gerd Leonhard,**
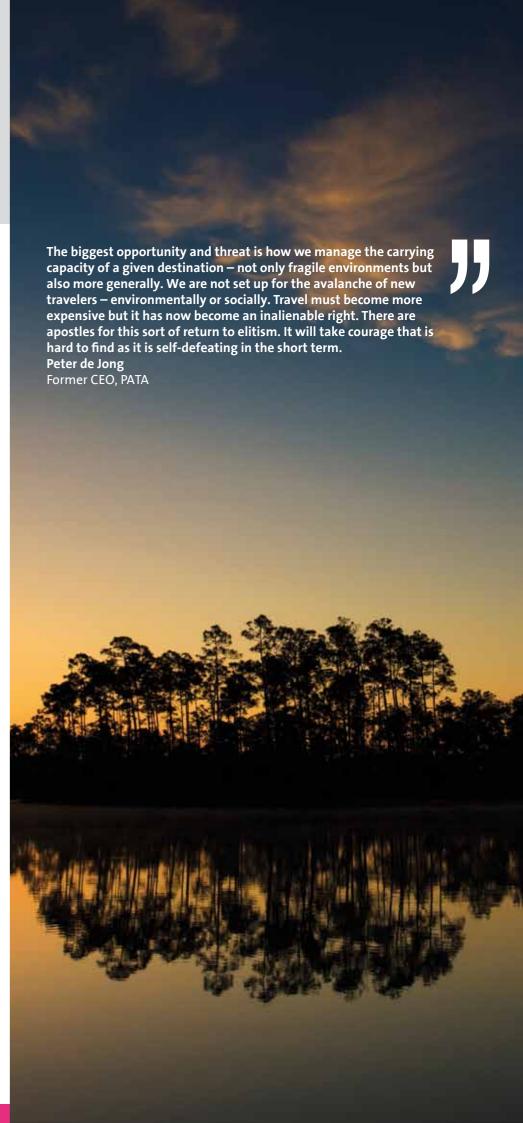> CEO, The Futures Agency

Carrying capacity

One of the growing challenges for the sector is what happens when a site or destination reaches its carrying capacity.
The World Heritage Committee names 34 sites on the list of World Heritage in danger, including popular tourist sites such as the Florida Everglades[22]. Quotas have also been established for key sites such as Machu Picchu in Peru and Kruger National Park in South Africa. Such quotas may become more common as a mechanism to control visitor numbers and encourage high value, low volume tourism.

> *Tourism congestion is a big issue and has been for the last 10-15 years. It rewrites the delivery of the experience product... and restrictive facilities, in general, will occur.*
> **David Jones**
> Former Director Genera, the WYSE Travel Confederation

> *The biggest opportunity and threat is how we manage the carrying capacity of a given destination – not only fragile environments but also more generally. We are not set up for the avalanche of new travelers – environmentally or socially. Travel must become more expensive but it has now become an inalienable right. There are apostles for this sort of return to elitism. It will take courage that is hard to find as it is self-defeating in the short term.*
> **Peter de Jong**
> Former CEO, PATA

3.2 Tomorrow's traveler

In this section we explore how the nature, needs and expectations of tomorrow's traveler may evolve.

The evolution of segmentation
What segmentation strategies and techniques can be applied in a decade where individualism and personalization are coming to the fore?
Historically, the industry has placed great importance on segmenting customers with increasing accuracy to help define appropriately targeted offers. Throughout this report, the highlighted drivers suggest traditional notions of segmentation have to evolve. As our identities become more fluid, so the ability to define consumers by their income or buying behavior becomes ever harder. How do we segment a divorced female executive who buys value meals on weeknights, likes the opera and her local football team, prefers beer to wine, recycles but loves bottled water and has relatives on three continents? A greater emphasis will be placed on offering a consumer led spectrum of choices from which guests can personalize their hotel stay – encompassing everything from room size to linens, media and amenities.

In the survey, 71 per cent agreed that by 2020 'traveler motivations will become increasingly fragmented and diverse and harder to segment into clearly definable customer groupings'. An implication is that the emphasis of segmentation might change from seeking new customers to better serving existing ones during their stay. 'Micro-segmentation' based on more sophisticated data mining techniques may also help spot and market to those with similar profiles to recent customers. Advances in cognitive science and techniques such as neuro-marketing may make it easier

to understand the buying triggers and emotional influences for those who choose one property over another.

One of the benefits of such a focused data mining approach is that it will allow far deeper understanding of the true revenues by micro-segment and what it really costs to service different types of clients and those from different geographic regions. Indeed, 97 per cent of survey respondents believe that by 2020 'hotels will increasingly consider factors such as cost of servicing, level of spend and average length of stay when targeting potential customers in different geographic markets.'

Hear me, study me, know me and remember me
One of the big frustrations for travelers is a concern that their voices aren't really being heard by the industry and that hotels aren't paying enough attention to dialogues on social media.
While some industries have embraced concepts such as co-creation with customers and open innovation to source ideas from outside, many hotels appear hesitant to adopt such approaches. In the survey, 96 per cent agreed that by 2020 'hotels will need to develop strong social media 'listening skills' to understand how customer needs and perceptions of brands and service quality are truly evolving and to develop service propositions, marketing messages, and pricing solutions that reflect the needs of an increasingly diverse customer base.'

Another source of frustration is the need to provide similar data on a repeated basis – to travel agents, visa and customs agencies, airlines and hotels. A related concern is the apparent inability of such organizations to share customer profiles. Furthermore, the greater the desire to personalize the customer experience, the more data will be required to do it. If such information has to be provided repeatedly, this could mitigate against the benefits of personalization.

Social networks may offer one solution. There is increased competition to 'own the social graph' and provide a single profile of the individual which is then shared across social networks. Customers may be willing to provide a deep profile to a secure social network if they knew it would then be used effectively by all travel providers. More importantly, they need to see that such data would really be used to personalize the travel experience and that hotels will continue to learn about the guest through each stay. The differentiation and advantage for hotels comes from what they do with the data to enhance and enrich the guest experience.

Newly wealthy and ready to travel
A deep understanding of the new middle classes will be critical to tomorrow's hotel propositions.
Continued growth of the emerging nations is increasing the proportion of the population that can be considered 'middle class'. The World Bank[23] estimates that the global middle class will grow from 430 million in 2000 to 1.2 billion in 2030, defining the middle class as those earning US$10-20 a day (an average income range between Brazil and Italy). The Bank predicts China and India will account for two-thirds of the expansion. Homi Kharas of the OECD states that Asia accounts for less than one-quarter of today's middle class, but by 2020 that share could double.

He also notes that by 2020 more than half the world's middle class could be in Asia and Asian consumers could account for over 40 per cent of global middle class consumption[24].

The rate of growth of the middle classes is clear from the Goldman Sachs projections (figure 2) on the share of population with incomes between $6,000 and $30,000 in PPP terms for the BRIC and so called 'Next 11' emerging economies[25]. The highlighting shows that by 2015 the majority of these economies will have 50 per cent or more of their population in this income range.

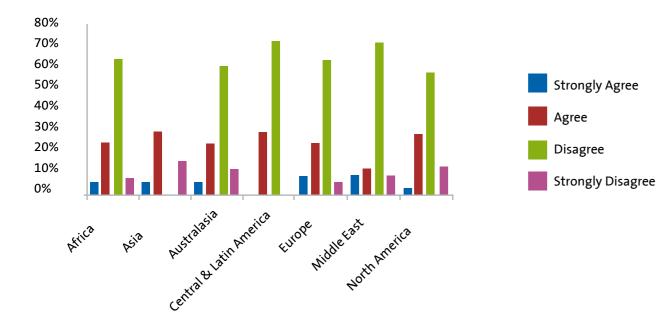|	2009(%)	2015(%)	2025(%)	2040(%)
Brazil	46	52	59	57
Russia	71	71	56	29
India	6	16	46	89
China	37	59	75	53
Korea	67	46	23	7
Bangladesh	0	1	6	38
Egypt	39	57	84	82
Indonesia	16	29	57	87
Iran	70	77	73	41
Mexico	61	65	65	49
Nigeria	6	9	18	42
Pakistan	9	13	22	49
Phillippines	16	23	40	69
Turkey	79	81	70	36
Vietnam	7	21	51	84

Figure 2 - Tracking the rise of the middle class across the BRICs and N-11[26]

As individual income and wealth increases, travel becomes a natural aspiration. For many, a branded hotel stay at home or abroad could be a once in a lifetime or rarely repeated experience. Their expectations will differ from the seasoned traveler and will have been framed largely through the media and world of mouth. While some first time guests may have a strong desire for deep personalization of the stay to suit their own preferences, many may simply come wanting to be awed by every aspect of this new experience. The importance of these new travelers was recognized in the survey with 75 per cent agreeing that by 2020 'the Asian middle classes will make up the largest share of international travel.' Hence the emphasis will be on the warmth of the welcome, the friendliness and helpfulness of staff, whether these new guests are put at ease or daunted by the experience and the ease with which they can use all of the room and hotel facilities.

Despite UNWTO predictions of 130m inbound travelers making China the world's premier destination by 2020[27], in the survey 67 per cent did not believe China will become the world's number one destination by 2020. Indeed, 79 per cent of those in the Middle East believe Chinese destination supremacy by 2020 is unlikely and whilst those in Asia are most inclined to agree with the proposal, it also had the highest rate of people strongly disagreeing, at 16 per cent.

> **Chinese travel will be the equivalent of the baby boom - it will change the world.'**
> **Joe Brancatelli**
> Former Executive Editor,
> Frequent Flyer Magazine

■ Strongly Agree

■ Agree

■ Disagree

■ Strongly Disagree

China will become the world's number one destination by 2020. 602 Respondents

Too busy to care

One of the most challenging groups to serve will be those who demand highly attentive and personalized service but who consider themselves too busy to spend any time providing the necessary information on booking or check-in. The expectation will be that the hotel will use technology to find out about them – e.g. from the internet and learn about their needs and behaviors based on what they actually do in the hotel.

Complex lives, pressurised finances

How will hotels serve those in the developed world, for whom life could get harder over the next decade? Cuts in public sector spending, layoffs of government workers, a cautious private sector and the potential for further economic shocks could combine to drive down the real value of incomes and savings. As a result, spending patterns could experience some fundamental long term changes. A January 2010 PayPal[28] study found that one in six British people said they would now save up for things they want rather than using a credit card to buy them. Shoppers have also become more price aware, with nearly six in ten people in the study saying they're more conscious of how much things cost and more than half claiming they've started bargain hunting. Such attitudes will inevitably carry through to the booking of travel and hotel stays.

Pressure on personal finances may force us into increasingly complex lives – performing many of the tasks we would have outsourced in more affluent times – from elderly care to cleaning and home maintenance. We could also see a rise in those taking further education alongside their work commitments. However, holidays will

not necessarily be cut from the budget. In the survey 83 per cent felt that by 2020 'people will view travel as a right rather than a luxury and consider it an increasingly important part of their lives.' Against this backdrop, the role of the holiday will change in people's lives, providing a crucial outlet to relieve stress and offer a much needed break from increasingly pressurised routines of daily life. Holidays for this group may become shorter and less frequent. They may opt for easily accessible local destinations rather than those which require more complex travel planning and lengthier journeys. With literally every minute counting on such trips, the expectation of the hotel experience and the pressure to 'get it right' will be immense. This group could indeed be the most resource intensive in terms of their demands for quality service and their willingness to complain and seek redress.

Financial drivers may also lead to a change in the consumption habits of such travelers – with greater demand for refrigeration and food heating facilities as they opt to self-cater. We could also see a rise in time-share and vacation rental demand. Some may decide not to pay for accommodation at all and choose instead to go for the increasingly popular option of house-swapping.

Craving simplicity

Another dimension of increasingly complex lives is that some consumers will crave simplicity when it comes to their holiday choices. This may mean de-cluttering the hotel room, simple, natural food choices and a preference for ethical, authentic and potentially cheaper options across the board. In some respects, catering for the guest who wants less may be easier – particularly in terms of room fit-out.

Wealthy and hard to please

Those with wealth will continue to play a role both in terms of their demands of hotels and their influence on the aspirations of the rest of society. The 14th annual World Wealth Report[29] from Capgemini SA and Merrill Lynch highlights that overall global wealth of those with liquid assets of high net worth individuals (HNWIs) – those with at least $1 million - increased 19 percent from 2008 to 2009 to $39 trillion. North American wealth rose 18 percent while Europe had positive growth of 14 per cent. The value of Asia's HNWIs leapt by 31 percent from 2008 to a total wealth of $9.7 trillion, exceeding Europe's $9.5 trillion. Nevertheless, Americans still constitute the wealthiest region with 3.1 million HNWIs worth $10.7 trillion in total.

This HNWI segment expects 24/7/365 service, experiences constant service innovation elsewhere – especially in the online environment – and drives a general rise in societal expectations. Hotels may need to get used to customers who expect perfection, may never be satisfied and are reluctant to provide feedback.

An aging society

One of the biggest and most persistent trends hotels will need to address is the changing age profile of society in both the developed and developing world. Globally, the UN projects that the population aged over 65 will rise from 5 per cent in 1950 and 7 per cent in 2000 to 16 per cent in 2050. Within developed economies the proportion over 60 is expected to rise from 22 per cent to 33 per cent between 2009 and 2050, and in the developing world, it is forecast to grow from 9 to 20 per cent over the same period[30].
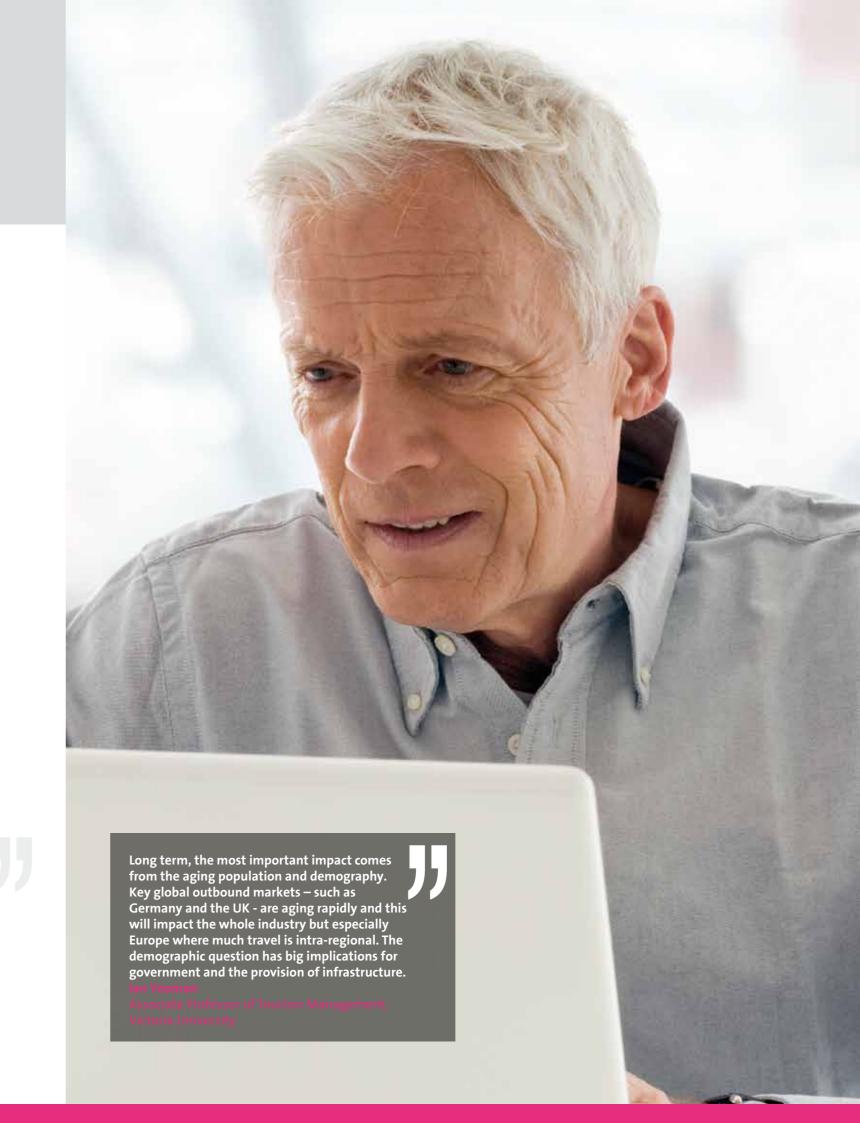
Allianz (2010) projects that, driven by the emerging markets of Asia, the global retirement market could grow to $46 trillion by 2020 from $28 trillion in 2010[31]. This implies catering for an older traveler and broader family groupings. In the survey 57 per cent said that by 2020 'multigenerational holidays will become increasingly popular', with Europe – the most advanced continent in aging - having the strongest conviction about this. A possible counter force could be the growing trend towards increasing the retirement age across many developing economies. This could lead to the baby boomer generation delaying major travel plans.

> **The client is king and will become more powerful and demand a deepening customization of travel. Value can be tailored and will continue to be.**
> **Peter de Jong**
> Former CEO, PATA

> **Hotels haven't updated their personas – behavior has changed but an update is needed every 2 years. They may have changed their persona many years ago but need to realize that yesterday's 50 year olds are not the same as today's 50 year olds.**
> **Susan Black**
> Founding partner, Black & Wright

> **The majority of Chinese travelers as well as European and Americans will be old people. There is a serious graying of populations. Our infrastructure planning, environmental planning and end products have not come to terms with this.**
> **Peter de Jong**
> Former CEO, PATA

> **Long term, the most important impact comes from the aging population and demography. Key global outbound markets – such as Germany and the UK - are aging rapidly and this will impact the whole industry but especially Europe where much travel is intra-regional. The demographic question has big implications for government and the provision of infrastructure.**
> **Ian Yeoman**
> Associate Professor of Tourism Management, Victoria University

Rising female spending power

The pressure to cater more explicitly to the needs of the female guest will rise as the understanding of their spending power and influence increases.
The World Bank estimates that by 2014 the earning capacity of females will reach $18 trillion - more than the estimated 2014 gross domestic product of India and China[32]. Analysts recognize that the balance of power is definitely shifting and that women are now a strong economic force to be reckoned with. Boston Consulting Group estimates that by 2020 females will control $15 trillion or 70 per cent of total global consumer spending[33].

In Asia, ladies' only floors are coming in more so than previously, which brings about a design issue. In Japan there are female only carriages on trains. In general targeting is becoming more refined, not just based on gender but on a whole host of factors.
John Koldowski
Director of Strategic Intelligence, PATA

Personal genetic profiles

Hotels will soon be facing the challenge of responding to customers' genetic profiles.
The mapping of the Human Genome has enabled rapid advances in the genetic profiling of the individual. Today, websites such as 23andme.com offer us the ability to perform a comprehensive genetic test against a variety of traits to understand our disease risks, carrier status and potential drug responses. Such tests are available today for less than $500. By 2020 such information could be carried on our phones and shared with airlines, hotels and restaurants to ensure that the food we are offered matches our personal health profile.

Case Study
The Hilton Arlington Hotel

The Hilton Arlington Hotel introduced 15 new PURE Allergy Friendly Rooms with the goal of creating an allergy-friendly environment and removing up to 98 per cent of bacteria and viruses. The rooms use an air purification system which is designed to provide air quality averaging four times cleaner than the threshold necessary for asthma patients. The system is classified as a Class II medical device by the FDA. In addition, micro-fiber, hypo-allergenic pillow cases and mattress covers are used to reduce allergies triggered by dust mites. Source: Hotel Interactive[34]

Engaging Generation i

The historic assumption that future generations will want to travel more than their parents is being challenged.
Lastminute.com's report on The Future of Free Time (May 2010)[35] argues that: "… a new generation will reject travel altogether in favor of gaming, social networking and 'always on' media." The challenge for hotels will be to find a range of equivalent attractions that entice this group of 'Go-Nowhere-Gamers' and captures their interest. This may imply providing access to the kind of rich immersive technology environment that individuals couldn't afford at home and offering the opportunity to try out new games, consoles and devices which individuals could then go on to purchase at home.

Corporate spending

The sector now has to plan for a range of possible scenarios for the speed, scale and nature of the recovery of corporate travel spending after the downturn.
An August 2010 study by The US National Business Travel Association Foundation, sponsored by Visa, found that worldwide spending on business travel fell 8.8 per cent in 2009 – reported as the largest drop the industry has seen since the recession in 2001 and the events of 9/11[36]. The study predicts that Asia, Latin America, and the Middle East will grow faster than North America and Europe. The study also found that China, the only nation to grow business travel in 2009 (8.5 per cent), and other Asian markets currently increase business travel spending at about four times the rate of the United States. China is forecast to add nearly $130 billion in business travel spending by 2014, potentially surpassing the U.S. market by 2015.

The issue is whether recession-led changes in travel spending patterns will last or evolve with the business cycle. Clearly some have turned to alternatives such as virtual meetings and videoconferencing – with Marriot and Starwood introducing videoconferencing facilities to tap into this revenue stream. Others have sought to centralize meetings in easily accessible locations, traded down on the class of accommodation and reduced the frequency and duration of trips. However the increased focus on developed economy firms seeking out emerging market opportunities to counter domestic economic sluggishness will lead to a rise in travel to certain markets. For hotels the issue is whether rates are the primary mechanism for capturing business from their rivals when overall demand is sluggish or there are additional service options, loyalty rewards and support that can be offered to attract clients and maintain pricing levels.

Every recession drives awakenings. This recession is driving away business class to be replaced with premium economy.
Joe Brancatelli
Former Executive Editor, Frequent Flyer Magazine

Always on

The growth in 24/7 access to the internet via mobile phones could have significant service implications.
The picture most commonly painted of our world in 2020 is one where the mobile has reached every segment of society and is the most common internet access tool and means of interaction for the bulk of the population. Nokia forecasts that the total number of mobile subscribers will rise from 4 billion in 2009 to 5 billion by 2015 and expects extraordinary growth in mobile data traffic - rising 300-fold by 2015[37]. At the same time, the boundaries between how we use technology at home, at work or while traveling are blurring. A January 2010 survey by Lowcostholidays and Dixons Travel (UK) found that 73 per cent considered a mobile phone as an essential gadget to take with them on holiday and 87 per cent actually used their mobile while away. A further 59 per cent said they accessed the internet while on holiday[38].

Many already baulk at the idea of paying for hotel internet access. By 2020 it seems likely that not only will free access be demanded, but the accompanying expectations of the speed, bandwidth and functionality provided will have increased dramatically.

Case Study
Hilton Hotels

Hilton Hotels in Germany and the UK have launched mobile web and iPhone apps that enable full booking capability while on the go. The service includes the ability to access and change booking info, preview hotel images and is fully integrated into Hilton's loyalty program. Hilton Mobile uses MTT's intelligent mobile hotel platform, m2bed, to meet Hilton's requirements, automatically directing customers to a view of the site optimized for their particular device. The site is designed to minimize scrolling, clicking and typing and features a 'click to call,' feature that offers users an alternative way of contacting Hilton should it be necessary. Source: Hotel Marketing[39]

Immersive technology

Generation Y and those that follow are growing up immersed in the digital world. This is shaping their expectations of hotels as guests, employees and business partners.
By 2020 the range and nature of technologies we use and interact with and the number of customer 'touch

Mind Control Headsets

Source: Emotiv

points' will expand dramatically. The challenge for hoteliers will be to accommodate, provide when required and understand the impact of these technologies on the hotel environment. For example, technologies such as augmented reality and mind control headsets are already with us and developments such as gesture interfaces and 3D mobile phone displays could be common by 2020. (These emerging technologies are explored in the next section.) The desire for customers to converse in their own language will also grow as will the expectation that hotels will accommodate multiple touch points through all of the current and possible future customer contact channels.

Beyond the experience economy – The rebirth of personalization

Personalization is forcing industries into a mindset shift from 'producer-led segmentation' to 'consumer-driven choice'.
Much has been made recently of the desire for consumers to go beyond the acquisition of material goods and to engage in experiences. The concept is now evolving to take account of the desire for that experience to be personalized and for the consumer of that experience to be a key player in its design and delivery. While our parents and grandparents grew up with high levels of personalization, from the 1960s through to the 1990s automation and standardization became the order of the day. The internet and mobile phone have given new life to the personalization agenda. The internet is providing the choices, while the Smartphone and tablet PC's and a range of other devices like the Apple iPad provide the means of access.

A number of advances are combining to suggest that the decade to 2020 will herald massive advances in the field of technology enabled personalization, promoting individual choice as a right and heralding a shift away from 'one size fits all' solutions. The emergence of 'App culture' is creating a generation which believes that whatever they want, whenever they want it, there's an App for it. If there isn't an App, the social networks provide a platform to discuss it, and if the demand is there, someone will develop it.

Luis Castillo Vidal, an associate professor at the University of Granada in Spain and an expert in artificial intelligence, says 'The better adapted the product is to a person, the more valuable it will be for this person.'[40] He suggests that true personalization becomes possible at the point when our devices are intelligent enough to learn our characteristics and behavior through experience. Ideally, we will be able to transfer this information between devices much as we transfer computer files today.

These developments provide a means of fulfilling an increasing culture of individualism, backed by rising personal wealth in developing economies, and an already demanding western consumer. In the survey 92 per cent felt that by 2020 'hotel guests will expect their stay to be personalized around a set of choices they make at the time of booking or prior to arrival'. This shift towards intense personalization starts to challenge and potentially limit the value of traditional segmentation approaches and places greater emphasis on the concept of a customer focused 'service spectrum' – a menu of choices from which guests can configure and personalize their hotel stay should they wish to do so at or after the time of booking.

Case Study
InterContinental Hotels Group

IHG is installing Microsoft's Surface technology in select properties to enable guests to find the information they need when they want it. Surface is a 'multi-touch computer that responds to natural hand gestures and real-world objects, helping people interact with digital content in a simple and intuitive way. With a large, horizontal user interface multiple users can collaboratively and simultaneously interact with data and each other. '[41] IHG has loaded the system with custom-tailored information such as Web site content, video interviews and local maps, guests can select activities, plan and print their schedule.[42]

3.3. Business transformation drivers

In this section we explore examples of how hotels are driving innovation and strategic change in the sector.

Open innovation and collaborative design

Tapping the innovative talent and ideas of those outside the organization is now a priority.

Across the business world, firms have been adopting a variety of techniques to open up the innovation process. Proctor and Gamble are seen as pioneers of 'Open Innovation' – an approach that positively encourages those outside the organization to share their ideas – sometimes for a share of the reward – but often for free. Apple has built an entire business model on this basis – with over 100,000 developers who've developed an estimated 300,000 apps for the iPhone – at no cost to Apple. Within the sector, experiments have taken place. For example Hilton Hotels participated in an open innovation challenge targeted at MBA students and addressing the question 'what kinds of partnerships does the hotel chain need to cultivate in order to grow the business?' Hilton said a number of the ideas presented 'have a significant potential to enhance the way we shape the Hilton guest and Hilton team member experience'[43].

Service innovation

Incremental and radical innovations are being undertaken to refine the guest experience.

Innovations have been introduced across the spectrum of hotel activities from check-in to housekeeping. While some are to be expected – such as the provision of free Wi-Fi, many have been more unexpected. In an effort to drive efficiency, Marriott has co-located a JW Marriott and a Courtyard on the same site at the Hangzhou Towers in China with a single management and common back-end services to support both hotels[44]. To enhance the guest experience, Hyatt Andaz offers free mini-bar snacks and bottled water, has replaced check-in desks with 'hosts' equipped with tablet computers and opened up the kitchen in its Midtown Manhattan property to encourage guests to talk to chefs[45]. It has also experimented with the reduction of housekeeping services to assess the impact on service and costs. All Hyatt Place hotels have installed food ordering kiosks in the lounge areas so guests can order 24 hours a day[46].

The sector has been embracing mobile technology and social media. To speed up arrivals, the Holiday Inn has introduced a Smartphone based Fast Check-in service[47]. Starwood's 'Better When Shared' campaign[48] enables guests to share their experiences on the website. In the case of Joie de Vivre, regular weekly exclusive special offers are promoted to the Twitter and Facebook communities with great reported success[49]. There has been a proliferation of travel related social media tools ranging from sites that allow you to rate your trip to those that enable groups to form, create shared travel plans and potentially reverse auction them to providers. One example is Dopplr. Members share personal and business travel plans privately with their networks, and exchange tips on places to stay, eat and explore in cities around the world. Dopplr presents this collective intelligence - the travel patterns, tips and advice of the world's most frequent travelers - as a Social Atlas[50]. In the survey 90 per cent agreed that by 2020 'customers will increasingly use social media and collective intelligence travel services (like Dopplr) to define the desired 'product' for a temporary self-forming group'.

Case Study
Marriott

Courtyard by Marriott won Hospitality Technology magazine's 2010 Hotel Visionary Award for installation of the 57-inch interactive LCD touch screen GoBoard™ in over 130 hotels in the U.S. and Canada. Developed specifically for Courtyard by Marriott by Microsoft and Four Winds Interactive, GoBoard provides guests with information on the local area, airport, weather, maps, news, business and sports headlines. Guests can use the system to find and print travel directions to restaurants and local attractions[51].

> **Beyond 15 years, hotel styles will begin to change drastically in terms of design and materials used – that will mark a period of true differentiation.**
> **John Koldowski**
> Director of Strategic Intelligence, PATA

Innovation in hotel design

The aspirations of hotel owners and the imagination of their guests will continue to be inspired by innovation in hotel design.

Two distinct themes appear to be emerging in the designs that are being put forward for the hotels of the future. The first is radical concepts for the location, form and feel of hotels – with ideas as diverse as cliff side hotels, air cruisers and flat pack designs gaining Radical Innovation commendations and awards[52]. The second theme focuses on driving innovation into the visual design and operational effectiveness of mainstream hotels. Amongst the designs coming through, key features include a strong focus on customer centric-design and rethinking the end–to-end experience from arrival to departure. Understanding the pressure of our daily lives, hotel designers are also placing greater emphasis on presenting the hotel of tomorrow as an immersive experience with everything we desire offered under one roof.

This also leads to the notion of offering a safe and convenient place for guests to escape and experiment with activities they would normally pursue at home. Recognizing a growing reaction against standardization and environmental excess, many designs are emphasizing localization and authenticity, a low environmental footprint and even modular construction of properties that can be removed after the tourist season.

Looking ahead, what can be delivered and the cost of doing it will be influenced by new materials and techniques. Advances in fields such as nanotechnology and biotechnology offer the potential for a whole new generation of construction materials. These materials will have the ability to monitor, adapt, clean and repair themselves and will offer a significantly lower environmental footprint.

Case Study
Mosaic - Winner of the Hospitality Design Radical Innovation Award (2010).

Mosaic is designed to deliver affordable, pop-up hospitality— prefabricated and portable to virtually anywhere. Destination designers, WATG conceived Mosaic to be entirely flexible, comprised of individually configured, modular Prisms, outfitted as needed as spas, salons, guestrooms, mini-homes (multiple Prisms such as kitchenette and bedrooms), or tented villas (an addition to a luxury resort at peak season). Grouped together, Mosaic Prisms are designed to be attached organically to Mosaic Hubs that contain lobbies, restaurants, bars, lounges, and other amenities. Source: Hospitality Design[53]local attractions[51].

> **Emirates Hotels and Resorts invests in ongoing collaborative research in all its destinations and implements architectural designs that not only encompass environmentally sensitive building, but also create an authentic 'sense of place'.**
> **Anja Eckervogt**
> WTTC

Hotel group strategies and business models

The economic downturn has encouraged all of the major brands to re-evaluate their strategies and business models.
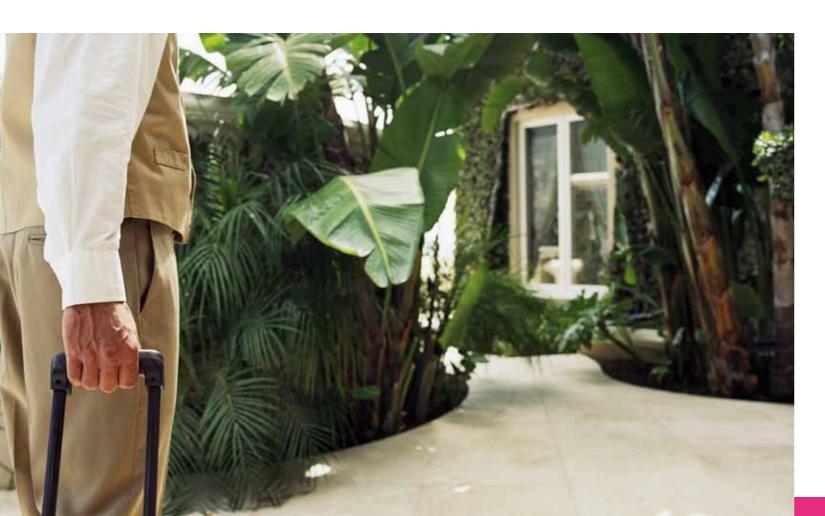
While there are common themes to the resulting plans, there is also considerable diversity in what is considered a winning strategy. For example both Carlson[54] and Hyatt[55] have recognized some clients downshifting and are developing propositions to target mid-range customers (e.g. $130 / night) in response.

Many such as Accor[56] and Wyndham[57] are continuing their programs of selling off hotel assets, extending their expansion into franchising and Management Services Contracts and identifying new models of hotel ownership for both their own portfolio and for the development of new properties. Hyatt and Wyndham are considering taking new brands into their portfolio while they and Accor are placing their main focus on extending the existing portfolio.

Expansion in Asia, Latin and Central America, Europe and increasingly Africa is a common feature for many, with India a particular focus for brands such as Carlson, Hyatt and Starwood[58]. There is also a growing focus on driving operational efficiency for Accor, Carlson and Marriott[59] with particular focus on marketing, sales, distribution and technology. Accor and Carlson have both emphasized the development of online capabilities coupled with development of their loyalty programs as key drivers of customer acquisition and retention.

> *Offering more for less is the goal -only technology can solve this problem.*
>
> **Mike Blake**
> CIO, Hyatt

3.4 Technology and connectivity drivers

In this section we explore how emerging developments in technology and connectivity could influence the way in which our guests will work and play, the design of the guest environment and how hoteliers manage their business. For the decade ahead, technology will be central to better understanding customers, delivering on guest expectations, managing operations and refining sales and marketing approaches. In the survey, 95 per cent agreed that by 2020 'hotels will increasingly look to new technologies to drastically increase efficiency, reduce costs, personalize the customer experience and improve service'.

Technology, media and telecommunications convergence

The next decade promises massive acceleration in the range of technologies and communication methods available to hotels and their guests. Key will be the convergence of information technology, entertainment media and telecommunications functionality. A generation is emerging that doesn't want or need to know the difference between them. The challenge for hotels will be to stay abreast of developments in these fields, monitor changing customer expectations, understand the storage, bandwidth and security implications and adopt a consistent strategy for managing the introduction and exploitation of new technologies. The more technologies converge, the greater the likelihood that the customer will bring with them that which was previously provided by the hotel – from entertainment through to broadband connectivity.

Listed below are examples of technologies we expect to see in hotels in the next decade, broken down under six key domains of use although most will have applications across multiple domains. They are described more fully in appendix 1:

1. Relationship management

2. Personal technology

3. Guestroom functionality

4. Meeting support

5. Guest services

6. Business operations and management

> *Remote check-in kiosks will also be developed for guests to be checked into their room by a hotel "experience expert" who will be able to give the guest their key while walking with the guest to their room.*
>
> **Jerad Bachar**
> Director, Dubai Convention Bureau

Widespread now	Widespread by 2015	Widespread by 2020
Relationship Management		
1.67 billion web users Rise of social meeting Travel planning Tablet computers Wireless broadband Virtual travel	Dominance of online bookings Evolution of Customer Relationship Management (CRM) High bandwidth wireless broadband Speech recognition and language Translation in daily use	5 billion web users Intelligent agents / Software assistant Semantic web Intelligent web Immersive web (Use of web technology to deliver sensation, experience and emotion)
Personal Technology		
Augmented reality	Explosion Of personal display devices Mind control headsets 4G phones Intelligent interfaces	5G phones Gesture interfaces (Figure 1.) Heads up displays
Guestroom Functionality		
Centralized and personalized control of media, lighting and temperature	3D TV Multimedia beds IP telephony IPTV Smartphone room access In room concierge	4D TV Sensor-based room management Personal robots
Meeting Support		
	Video conferencing / Tele-presence Virtual meetings and Hybrid events	
Guest Services		
Self service kiosks 3D displays	Interactive displays Interactive surfaces Near Field Communication (NFC) Quick-Response (QR) codes	Touchable holographs Haptics technology (allowing users to physically ''feel'' virtual objects on a computer)
Business Operations And Management		
Cloud computing	Biometrics (E.G. Voice / Facial recognition) RFID	Sensor networks Swarm intelligence (Analyzing group behavior) Remote sensing security Crowd farming
Data security	Ambient intelligence Hybrid platforms Monitoring and surveillance Knowledge mining Predictive analytics	

Source: Frog Design

Figure 1.
Gesture Interfaces

The whole of generation Y is completely tech savvy – the industry needs to keep up but having said that, the concept of providers meeting consumer expectations is important. The shift will alter the industry's relationship with traditional media and leads the industry down a path of increased customer awareness.

David Jones
Former Director General,
WYSE Travel Confederation

Converging technology will render some devices out of date as more user friendly, wide ranging devices are created. The iPad for example, with its enhanced functionality, may replace the laptop. This brings about questions for hotels – do they encourage BYO technology and provide skilled systems back-up, or attempt to offer a range of technologies for guests' use? Ian Yeoman reinforces the view that the mobile will gradually replace the PC as an access channel, explaining that '…a fraction of consumer transactions at the moment are via mobile, most are done on the PC. The former can only go up; the latter can only go down. The main barrier is the cost of data and roaming. That's the flip point. Once it's reached, mobile payments will increase.'

Technology management challenges
The challenge for the sector is not to try to identify every possible technology that might emerge, but rather to develop an effective scanning mechanism to monitor and evaluate new developments quickly. Key will be engaging the customer in the evaluation of all the technologies that could either be brought in by them or which could touch the guest during their stay. Given the range of technologies coming at the industry and the pace at which they are arriving, there are naturally concerns about the industry's capacity to absorb, evaluate, implement and actually benefit from these developments. John Stachnik argues that '99 per cent make use of it, but then you have to ask how many do it well. Maybe 30 per cent do so. If they can't handle their technology then how can they handle customer service?'

There is general agreement with the view expressed by Tanya Venegas that '…the travel industry tends to lag behind other industries when it comes to technology.' John Stachnik suggests this needs to change and that '…possessing great technology before the event is, and will increasingly become, very important. On site (for guests use), it's a nice addition but with mass penetration of iPods, iPads and Smartphone, it's not essential. Wi-Fi is another matter. User friendliness must underpin all technology offerings,'

Joe Brancatelli believes that tech-savvy customers could impact revenues '…BYO technology really raises an issue – effecting movie rental revenue for example. If a guest brings everything they need – music, video, computer, that changes the hotel experience'. Thus hotels '…need to stay up to date with product offering and consumer trends and match their expectations,' suggests Jean Luc Chretien.

> 'A cloud solution around email, would enhance internal communication, allowing staff to be more productive and engaged at work, indeed technology can make work more fulfilling. This equates to a better guest experience.'
> **Mike Blake**
> CIO, Hyatt

Case Study
Joie De Vivre

Joie De Vivre operates 33 luxury hotels in California and uses multiple social media platforms to drive sales and marketing – with extensive use of deals and coupons. Every Tuesday, Joie De Vivre tweets a new deal to its nearly 10,000 followers. Followers have hours to book the heavily discounted rate. Similar deals are offered to its 5,000-plus Facebook fans on Fridays. Joie De Vivre has booked over 1,000 room nights through such deals in less than a year with reportedly increased loyalty and trust as a result of using this system. Source: Hotel Marketing[60]

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4. Opportunities and implications

In the face of continued economic and market uncertainty, an evolving customer base and rapid technological change, clear questions arise about what strategies branded hotel groups should adopt for the decade ahead. In this section, we explore five separate dimensions of the issue, which are discussed below:

> Developing strategy in an uncertain world

> Management of the brand portfolio

> Evolution of business and revenue models

> Location

> Categorization in the era of personalization.

Developing strategy in an uncertain world
Portfolio management approaches to strategy will increasingly replace single global models. All of the indicators and drivers of change discussed in this report point to at least a decade of widespread uncertainty across the globe as countries recover from the financial crisis, wealth shifts across the planet, industries reinvent themselves and society comes to terms with the impact of these changes on their personal circumstances. The notion of adopting a single global hotel strategy or business model could be abandoned completely in the next decade. In its place, the idea of a portfolio approach to strategy has emerged – with different goals and tactics being deployed for different geographies and market tiers.

In an era where difference, creativity and adaptability will be valued highly by guests, far greater emphasis will need to be placed on developing distinctive strategies and customer-centered innovation. In the survey 96 per cent agreed that by 2020, 'in the face of intense global competition, the hotel industry will develop a strong focus on strategy and innovation – adopting approaches such as crowd sourcing and open innovation to generate new ideas.'

Management of the brand portfolio
Successful delivery of brand strategy will be dependent on the ability of the organization to translate vision into capability, processes and customer experience. Faced with a challenging economic outlook, views differ on whether hotel groups should seek to specialise on key niches or pursue a diversified portfolio. In the survey, 78 per cent believed that by 2020 'global hotel groups will increasingly seek to cover the full spectrum from budget through to luxury and heritage properties.' The expert interviews and survey respondents highlighted that, to a large extent, the issue was not the choice of strategy, but development of the right management capabilities, operating processes and staff capabilities to deliver on the preferred option.

Leverage of high street and luxury brands
There trend towards promoting the product brands used within a property or 'luxury branding' the property itself is expected to grow. For example Dubai's Burj al Arab Suites highlights its use of a range of Hermes bathrooms products[61]. Going a step further to full property branding, the first Giorgio Armani hotel opened on April 27th 2010[62]. The hotel offers 160 rooms and suites and eight restaurants spread over 11 floors of the Burj Khalifa in Dubai, the world's tallest building. In the survey, 79 per cent said that by 2020 they expect 'a new category of co-branded and co-designed 'signature' properties to emerge within hotel chain portfolios, providing differentiation and opening up ancillary revenue stream options'. The closer the tie between the brands involved, the greater the potential to theme the hotel, individual rooms and every aspect of the hotel experience. This in turn could yield additional revenue opportunities long after the stay. The co-branding concept could evolve to personality branded properties. We have grown accustomed to film stars, models and sports personalities branding food, clothing, cosmetics and even stores – could the concept be extended to hotels? Would there be customers for the Jumeirah Beckham Towers or the Hyatt Madonna?

Unbranded hotel groups
New owners in particular may seek to rent the capabilities but not the brand of experienced hotel groups.
 In many industry sectors such as financial services, the concept of 'white labelling' is commonplace. Typically, well known brands provide a service for a third party under the latter's identity. This was seen as a viable option by 77 per cent who agreed that by 2020 'we could see the emergence of a new breed of unbranded hotel group, offering 'white label solutions'- including sophisticated marketing, very high standards of service and advanced technology support while allowing owners to develop their own brands.' Whilst a white label service could be a viable addition to the portfolio of existing players, perhaps a more common model would be for such unbranded groups to be founded by managers leaving existing chains, backed by private investors.

Invitation-only hotels
The quest for differentiation is not expected to lead to the widespread creation of invitation-only hotels.
The super-wealthy have become accustomed to invitation-only stores, restaurants and cultural performances. Could the concept be extended to hotels? Our respondents were not so sure, and only 46 per cent expect to see 'the emergence of invitation-only hotels' by 2020.

Evolution of business and revenue models
Pre-emptive business model innovation may help reduce the impact of future downturns.
The economic downturn forced and encouraged firms across a range of sectors to experiment with their business models, pricing strategies and product bundling. In contrast, the hotel sector has been accused of failing to innovate on its basic business model. However, survey respondents have a clear expectation of change and 81 per cent agreed that by 2020 'hotels will increasingly experiment with a range of business models', with those in the industry (83 per cent) appearing more optimistic than their guests (79 per cent). In practice, a range of innovations have been adopted and could provide a more effective model for pre-empting future downturns:

> Raffles Dubai has introduced 24 hour check-in and check-out for guests. The service enables guests staying at any of the hotel's suites to stay a full 24 hours from the time of arrival[63].

> Several hotels, such as The Monarch in Dubai, have experimented with a 'name your own price' style auction to avoid simply cutting prices below cost unnecessarily[64].

> The Hoxton hotel in London offers a low cost airline style pricing model, with the first five of the 205 rooms being sold for £1 a night, and pricing then extends up to £185 as bookings increase[65].

The quest for ancillary revenues
The search for ancillary revenue streams could be a candidate for an open-innovation approach. The changes discussed elsewhere in this report suggest that room rates and profits may come under pressure while income from ancillary activities such as telephone service, internet access and movie rental could all reduce over time. The challenge for hotels is to strike a balance between maximizing guest spending on existing offerings and selecting complimentary new revenue generating options that enhance rather than diminish the guest experience. A common approach has been to offer the opportunity to purchase items the guest has tried in the hotel. For example, at Westin Hotels & Resorts, since the introduction in 2000 of its 10-layer Heavenly Beds, more than 35,000 beds and 100,000 pillows have been sold to guests after their stay[66].

In the survey, we tested responses to a range of revenue generation ideas. 91 per cent agreed that 'in the face of intense competition, hotels will increasingly turn their attention to generating ancillary revenues through activities such as increasing their share of the spend of each guest staying at their property'. Three other 2020 revenue generation scenarios were presented for evaluation:

> 80 per cent agreed that 'hotels would use discount offers to capture a share of pre- and post-trip travel spend e.g. purchase of luggage, clothing, transportation, insurance, duty-free etc.' This recognises the huge portion of spending around a trip in which hotels currently play little or no part

> 67 per cent believed 'hotels will create their own catalogues of branded amenities, clothing, furniture and decorations'. Brand strength and cachet will be critical to the likely appeal and pricing strategy adopted

> 89 per cent agreed that 'hotels will increasingly provide additional business services e.g. translation, access to legal and accounting advice, secretarial support, company formation, organization of small meetings, etc.' This suggests an important opportunity to experiment with providing a portfolio of higher added value business services.

Location
Joe Brancatelli believes that '... independent hotels will become about location and facilities.' For the majority of hotels, location is fixed, and thus a legacy determinant of your potential market and the facilities you can offer, whilst helping shape the services you provide. Two concepts could challenge this. The first is the concept of modular pod-style hotels that can be erected in almost any environment with minimal ecological footprint. The second concept is to co-locate different categories of property on the same site. 66 per cent agree that by 2020 'hotel groups and owners may increasingly seek to co-locate different categories of hotel from budget to luxury in a common location with shared catering and leisure facilities for use by all guests'.

Categorization in the era of personalization
Hotel categorization may need to evolve to focus more on service than facilities.
The drivers identified earlier point to the growing emphasis that will be placed on the quality of service. Traditional hotel star rating systems which focus on facilities provide little means for guests to assess factors such as the quality, ambiance, staff attitude and 'warmth' of a particular hotel. Instead, guests have turned to the social media to provide peer-to-peer ratings and assessments of the hotels they will and have visited.

In response to such challenges, Jordan's Ministry of Tourism has introduced a new hotel classification system based on the service provided rather than the hotel's facilities. Maha Khatib, Minister of Tourism and Antiquities, Jordan explains 'The hotel classification is designed from the point of view of the guest. It is not the input in terms of investment or effort, but the output in terms of guest satisfaction that is the deciding factor in the choice of standards and the relevancy attributed to them. In this regard, the only physical element determined by the new system is the size of the rooms. The previous system considered many others, such as the size of hallways, swimming pools, and the kitchen. The new system, for example, is not concerned about the size of the kitchen, but instead looks at whether the food service is good and delivered in a timely manner, and the food is of a high quality. The back-end structure of the hotel is not taken into consideration, as long as the expected standard of service is provided[68].'

Whilst appealing, such a change would require a fundamental shift in thinking. The focus in physical design, in-house processes and staff training would all need to be oriented towards maximizing guest satisfaction to ensure a hotel maintains its rating. Culturally, a hotel group may be happy to have a three of four star rating for different brands in the portfolio based on physical facilities. However, where a lower rating implies some failure in service, this may be much harder to live with – although it could also inspire service improvement.

5. The emergence of personalized service spectrums

Traditional notions of customer segmentation are being challenged. Personalization, the explosion of choice, 24/7/365 service and the growth of 'APP-culture' are driving the need to re-think product propositions. Customers want an increasing say, if not total control, over what they expect of their hotel and what they are willing to pay for. The business traveler who literally only sleeps in her room may care little about furniture and facilities but demand a bed that guarantees a relaxing night's sleep. Even within organized tour groups, the needs of individual guests may vary significantly. As people increasingly take their work with them on holiday, so we will also see a blurring between the needs of business and leisure guests.

In the survey, 71 per cent agreed that 'traveler motivations will become increasingly fragmented and diverse and harder to segment into clearly definable customer groupings'. This suggests a shift away from a 'producer-led' focus on internal efficiency towards a 'customer-led' focus on choice. This implies a 'total service model' in which choices could be offered on almost every aspect of what the guest sees, experiences and uses during their stay. This implies moving from segmentation models and standard packages to a spectrum of service options from which customers then select their precise requirements. Of course, some may still prefer the simplicity of standard offerings.

From a customer perspective, 92 per cent believe hotel guests will expect their stay to be personalized around a set of choices they make at the time of booking or prior to arrival. Whilst some might be skeptical about a hotel's ability to shift to such an extreme level of individual tailoring, in the survey 86 per cent agreed that by 2020, personalization will have been embraced wholeheartedly by the sector and that 'customers will have the ability to choose the size of room, type of bed, amenities, audio-visual facilities, business equipment, etc. on booking and pay accordingly'. For some, the hotel experience may offer the opportunity to try out bedding, furniture, linens, audio-visual equipment and amenities that are a change from those they use at home. Others may be looking for their bedroom to mirror their home environment as closely as possible in order to help them feel at ease as quickly as possible.

Service spectrums demand learning systems
Implicit in this notion of service spectrums and total choice is the idea of intelligent computer systems. Based on the experience elsewhere – particularly with web-based providers, customers will expect high levels of embedded intelligence in hotel systems. This implies remembering their choices, analyzing the details of what they actually did, used and purchased during their stay and learning from these to refine or enhance the spectrum of choices offered on the next visit. Internally, this intelligence can also be used to determine what facilities, services and amenities are most and least popular.

The spectrum of choice offered covers all of the activities and interactions before, during and after a guests' stay. The spectrum should also expand over time with advances in areas as diverse as intelligent furniture, personalized nutrition and our understanding of human cognitive functions and the drivers of choice. Some guests may want to exercise choice on every element of the spectrum. Others may have specific factors which they want to specify - e.g. the type of bed and linens used - but be happy for the hotel to provide its standard offerings on all other options.

The core elements of choice within such a spectrum are likely to include the following – which are discussed in more detail below:

> Customer relationship / communications

> Customer journey – core processes

> Staff and service

> The bedroom environment

> Food and beverages

> Technology, media and telecommunications

> Hotel services and facilities

> Pricing

Customer relationship / communications
There is potential to personalize every aspect of how a hotel engages with its customers before, during and after their stay. This starts with the preferred channels of communication (e.g. email, sms, via social media or post). Customers may also want a say on the frequency and nature of contact - for example do they want to receive special offers, pre-trip notifications, and a pre-visit call from the concierge to advice on leisure options or from the business host to arrange any special requirements? The loyalty program is also a prime candidate for tailoring – enabling guests to choose how they want to receive their rewards from free room nights, through to air mile credits to gifts, discounts and cash back rewards.

Customer journey – core processes
Here the key is to identify all of the personalization opportunities that exist within the customer journey processes' that take place in a hotel from welcome, check-in and room arrival, through to meeting attendance and ending with check-out and departure. Even if a customer has gone through an automated check-in process, there is still potential to offer choice around how they are welcomed. This can range from whether they want assistance with their bags, advice or special assistance on arrival, provision of fruit or snacks depending – for example - on their arrival time and length of flight.

The spectrum of check-in / check-out options will continue to expand with the various technology developments described earlier. The range would include traditional check-in desk, 'hosts' equipped with a tablet pc to guide you from arrival through to your room, self-service kiosks, Smartphone based check-in, use of biometrics and in-flight check-in – coupled with biometric or phone-based verification.

Staff and service
The ability to deliver a highly personalized experience will be dependent on the ability of staff to recognise and address the differing needs of each guest and respond in a manner that reflects what the customer has selected from the menu of options. Some guests may desire a 'low-touch' service experience whilst others may prefer to be advised and assisted at every possible opportunity. In the same ways as internet access can be purchased in fixed time blocks, guests may wish to pay for a certain number of hours of personal service to cover items such as room cleaning, valet services and concierge support.

Routine tasks such as room cleaning could be made a matter of choice with options ranging from daily, as needed (as suggested by room sensors) or on demand. Robot service assistants would extend the ability of hotels to offer service level guarantees any time of day or night. From a training and development perspective, cultural sensitivity, adaptability, problem solving ability and language skills will be critical for hotels if they are to deliver on the service spectrum concept. In the survey 93 per cent agreed that 'highly trained staff backed up by technology will be key to delivering personalized service and experiences'.

> *95 per cent pick a hotel based on its cleanliness, location, price and value. These basic four facets are also in their own way, customizable.*
> **John Stachnik** Chairman, United States Tour Operators Association

The bedroom environment

At the core of any hotel stay, guests may want to exercise most choice when it comes to the location and contents of their room. The range of options would need to include the floor, corridor positioning, view, room dimensions, shape, no. of windows, size of bathroom, and the type, amount and layout of furniture. By 2020 modular, intelligent furniture with built-in memory will remember a guest's preferred settings and adapt to changes in body posture. Other needs such as female only floors may be paramount. At the heart of the room, customers may want to choose from a range of different beds, pillows, linens and amenities at different quality levels and price points. Some may require transparency on the environmental footprint of the supply chain of everything that goes into their room.

Guests may want the ability to control environmental factors such as temperature, lighting and even the color of the walls. Choice could also be extended to the type of artwork displayed on the walls or for the provision of digital photo frames to display the guest's own choices. As technology advances, and intelligent wallpapers emerge, so guests may be able to configure the room décor on arrival or download their preferred design beforehand.

Case Study
Citizen M Hotels

The Citizen M Hotels in Amsterdam and Glasgow combine several innovations in room technologies to provide the guest with a chic, and due to the small size, affordable experience. The pod like size requires an innovative approach to space management – for example there isn't room to move around the bed to change the sheets. Citizen M has applied to patent a system whereby the whole mattress can be pulled up to the front of the bed vertically. The used sheets fall off and the clean sheets can be hung up on the two upper corners. The bathroom is divided into shower and 'throne' components, each placed in their own cylindrical etched glass 'rooms'. All other in-room technology including the flat screen TV, music and personalized light colour selection is derived from a single remote control[69].

Food and beverages

The more information we acquire about our personal pathology, genetic make-up and nutritional health, the more control we want over the food and beverage options available to us. For many of the customers attending, price could also become a bigger issue. Hence customers may want the ability to order 24 hours a day, via their TV screen or mobile device, from all of the restaurants in the hotel and from potentially cheaper options in the local area.

Other requirements could include pre-selecting food choices and meal times prior to arrival, locally sourced ingredients, and provision of refrigeration and food heating capabilities. From a dietary perspective, customers may want to provide health and genetic information in advance to ensure that they are only offered suitable food and beverage options. They may also want full provenance information for any food and beverages served to them during their stay. The ability to meet the chef and tour the kitchens may be additional experiential elements selected and paid for by some guests.

Technology, media and telecommunications

The rate of advance in technology and the likely emergence of high bandwidth 4G mobile devices means some guests may want a room with no technology. Others may simply be looking for a display screen or surface to project a larger image from their own device. Those who do want the hotel to supply the technology may wish to specify the channels they would like to view, request a 3D TV or book particular music and DVDs. A guarantee of the chance to try out the latest gadgets may become a brand differentiator and attract a particular type of customer. Some may want to book the opportunity to test out a new product or schedule a session with a technology advisor to help them master what they already have.

Case Study
The Trump Soho, Manhattan

The Trump Soho in Manhattan boasts a range of advanced technological features. Central to its guestrooms and suites is the energy saving Control4 Suite System which enables guests to control ambient temperature, lighting, curtain drapes and entertainment options with a remote device. Guests can set their own room preferences using the Green feature button. This offering is augmented by flat screen televisions, a home iPhone/iPod and docking station as well as optional in-room computers and personalized stationery. The offering is completed with a Nespresso coffee maker in each guestroom and suite[70].

Hotel services and facilities

Requirements will vary by guest and purpose of stay. While many elements of a hotel's services and facilities may be open to all, an increasing range of personalized services could be made available. These might include personal security, customized experiences such as a cookery lesson with the chef, an individual art instructor or 'out of hours' access to sporting facilities. Rather than a pay-as-you-go option for leisure facilities, some may wish to opt for payment of a flat fee to then be able to use all of the leisure and spa facilities for the duration of their stay. For business support, while many may carry a suite of technology tools that render them self-sufficient, others may be looking for the equivalent of a replica of their office – including full secretarial support.

Case Study
Sofitel Manila Plaza

The So Fit gym at the Sofitel Manila Plaza in the Philippines offers a virtual trainer across the range of equipment. Accessed via touch screen technology, the trainer can personalize workouts based on the fitness level, performance and goals of the user. The machines adjust to an appropriate heart rate for each user, enhancing healthy benefits and reducing possible injuries or exercise related illness. The exercise machines also have integrated consoles and monitors, enabling the user to watch their favorite show or listen to their favorite music whilst working out. Another feature is that all machines feature USB drivers, enabling guests to save exercise related data, such as distance traveled or calories burned, should they wish to do so[71].

Pricing

Today, when a customer agrees a rate for a room, they pay for all of the furniture, amenities and facilities in that room – whether or not they are used. Increasingly, such an approach will be challenged by those who only want to pay for what they use, and who may be willing to pay more for additional facilities and service. Indeed, 92 per cent of survey respondents believe that in a highly automated world, there will be a range of customers at every price point who are willing to pay for personal service. This implies offering customers the choice of a standard or 'fully loaded' room or a basic room which can be enhanced through a menu of free and paid options. Increasingly, customers will ask for flexible room times – enabling them to book a room for any unit of time they desire without having to pay an excessive price penalty if they don't book for a night.

6. Mapping a path to 2020

This section presents a framework of critical challenges for leaders to navigate as they develop their strategies for the next 5-10 years.

Strategic management imperatives

Throughout the report, we have emphasized that we are entering an era of uncertainty and potential turbulence. This suggests that past approaches to strategy development and implementation may need to be revisited as we switch to planning for a range of possible futures. This in turn requires hoteliers to develop their strategic management capability in six key areas:

1. Horizon scanning - Providing an early warning system by scanning the two, five and 10 year horizons to identify key trends, forces, developments and 'weak signals' of possible shocks and opportunities

2. Scenario based planning - Evolving strategy development, planning and budgeting approaches to consider a range of feasible economic and market scenarios rather than use a single set of assumptions

3. Anticipation - Having contingency in place to be enacted when the first signs emerge of possible future shocks similar to the recent economic crisis

4. Open processes - Experimenting with and adopting a portfolio of open-innovation, crowd-sourcing and customer engagement tools to provide continuous trend input, ideas and challenges to internal thinking

5. Rapid implementation – Developing the capacity to move idea to decision to execution quickly – with a focus on learning and continuous refinement based on feedback from the operating environment

6. Tomorrow's workforce - Development of leaders, managers and staff who are curious, tolerant of uncertainty, capable of scenario thinking and willing to make decisions with imperfect information.

Understanding the global context

The key here lies in developing real expertise in learning to assess the strategic impact of a volatile environment on the hotel business. While the start point is to ensure a rigorous and continually updated insight into political, economic and security risks by country, the issue is not simply one of deciding which environments to play in. We know that some of the most profitable hotels are those operating in conflict zones. Our analysis should help us understand the likely politico-economic scenarios for key countries, while internal data should provide insight on how profitability compares between properties in regions of high and low perceived security threats. The analysis should also seek to assess the contingencies in place or those required to address potential wildcard (low probability, high impact) disruptors in each market.

Energy, environment and sustainability

The sustainability agenda is likely to become an increasingly important priority for countries around the world and result in further legislation. This raises the baseline questions of how well we know our environmental footprint for each property and what actions are we taking to reduce it? Given expected shortages and rising prices for key inputs such as energy, food and water, an analysis should be undertaken of the impact of a rise of 10-100 per cent of any of these resources.

Given the sheer volume of activity going on in each area, future strategies need to ensure a balance between:

> Encouraging locally-driven initiatives at the property level

> Sharing best practices across the portfolio

> Tapping into best practices being developed in hotels and other sectors

> Exploring innovative new methods – for example the use of vertical farms to supply individual hotels.

Understanding tomorrow's traveler

The growth in the global population coupled with rising wealth in developing economies and massive uncertainty about the future behavior of customers from the developed economies are forcing a rethink of customer research and marketing approaches. We need to assess whether these approaches are fit for purpose in terms of targeting and attracting profitable business, capturing the voice of the customer and understanding the needs of segments with rising importance such as the elderly traveler. The rise of social media and the growing importance of personalization both raise the question of how well we understand the concepts and whether we have the right mechanisms in place to respond effectively to criticism and ideas that emerge from social forums. Finally, given the growing importance of the business events market – particularly in developing economies – the question arises as to the quality and distinctiveness of our strategy for such a highly competitive market.

Managing technology and connectivity

While 'Hotel 2020' is expected to be a technologically sophisticated environment, the journey there will be fraught with tough and expensive choices. These decisions will also have to be made against a backdrop of rapid technological advances and rising expectations of guests and employees alike. This implies that we need not just a strategy for which technologies we will deploy but also a clear strategy or guiding framework for how we'll make those decisions and evaluate the options presented to us.

Potentially, there could be an increasing technology gap amongst our customers. At one end will be those who are technologically self-reliant and simply want a room and power socket to support their needs. At the other will be those who expect the hotel to provide the most up to date entertainment, communications and computing facilities. New technologies will also throw up new challenges – whether it be for increased data security or how to manage the impact and potential visual clutter that could arise from next generation devices with holographic and heads up displays that are projected in public areas of the hotel.

Heads Up Display

Source: Frog Design

Delivering strategic innovation

In the face of intense competition and potential pressures on revenue, the spotlight will increasingly fall on the need for innovation to close revenue and profitability gaps. This raises the questions of how distinctive is our short, medium and long term strategy from other hotel groups and whether we have sufficient points of difference to maintain any price premium we are enjoying today? As we look at our brand portfolio, how should we respond to the positive support in the survey for co-branding and white label approaches – where in our global footprint are the best candidates for experimentation with new branding concepts? If ancillary revenues are an increasingly important target for us, how can we engage the customer in helping us identify options that would be valued by them and profitable for us? Finally, should we wait for industry or government action on quality certification of properties or is there competitive advantage to be gained from pursuing our own quality assessment audits?

Beyond segmentation – the rise of the service spectrum

The personalization agenda is growing and there is a need to explore the concept more deeply. The challenge will be to adopt an open approach that engages the customer at multiple points through the conception, design and implementation of a service spectrum concept. Internally, tough questions will need to be asked about the skills and capabilities required to deliver such a model, the staffing cost and how to determine pricing. Consideration will also need to be given to the impact on asset management, maintenance and storage if furniture is constantly being moved to and from guest rooms. From a brand differentiation point of view, the question will be how to introduce the concept to the market and what differentiation might be possible as competitors launch similar offerings.

7. Contributors

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8. Technology timeline

Technology	Industry implications
Relationship Management	
Growth in internet users	The internet is set to be the primary channel through which hotels engage with their guests. By 2020, the US National Science Foundation predicts the number of internet users will have risen to around 5 billion from around 1.67 million in 2010 (Internet World Stats)[1]. The primary means of access is likely to be a mobile device. In our survey 78 per cent strongly agreed and a further 20 per cent agreed that 'with nearly 5 billion users expected to be connected to the internet mainly by mobile devices by 2020, the travel industry will need to adapt its offerings to serve the mobile user'. This connectivity explosion will go beyond individuals to include vast networks of sensors and embedded devices that could transform both the guest experience and the way hotels are run.
Is everyone booking online?	The importance of the internet as a tool during travel research, price comparison and booking is now well established. The latest PhoCusWright study into trends in the European consumer travel marketplace finds that less than 10 per cent of travellers with web access in Europe's key markets plan and book travel products completely offline. Of these internet-connected travellers, only 9 per cent in Germany, 6 per cent in France and 5 per cent in the UK conducted travel bookings offline[2]. The rise of online travel booking may not kill off offline travel agents. Jerad Bachar argues '… the travel agent will still play a role in emerging markets for most travel requirements, but over time, travel agents will evolve into a predominant packaging agency or group tour operator.' Remuneration model for intermediaries will also change, suggests Jean Luc Chretien. He argues that the '…split between direct and indirect channels will not change but there is a move away from traditional distribution channels.' A key impact of the internet is to drive transparency of pricing. In the survey 86 per cent of respondents felt that 'widespread availability of information and transparent pricing will increase competition and drive down profit margins for most travel firms'.
The rise of social media	With expectations of upwards of a billion social network users by 2012, hotels are being urged to embrace the networks, understand how they are being used and grow their presence in these forums. The potential exists, to enhance the brand, strengthen the customer dialogue, encourage testimonials, build loyalty and ultimately drive sales. The problem for much of the industry as John Koldowski points out is that '…it is not understood how usage can evolve into a booking pattern.' Indeed in many ways the future impact and utility of social networks are constrained by the ability of data analytics to keep up. DeeAnn McKinney emphasises the need for analytics. 'We have to find a way to measure social media feedback ROI. People don't necessarily go to social media for travel info – so studies say, but they will start to.'
Travel planning	Many social media applications now boast more functionality and information than the hotels they are focused on. This is both a challenge and an opportunity for hoteliers as they try to evolve a social media strategy and determine whether they should provide the same information on their own sites. For example, TripKick tackles provides information such as guest reviews and photos, which rooms to request, highlighting issues such as the best floors, size, bathroom quality and quietness[3]. Bing Travel also provides rate indicators for hotels in 30 US destinations comparing current prices to what they've charged in the past[4]. Gerd Leonard explains that '…people already use API's (Application Programming Interface). These are a huge win for the travel industry as they give a great impression of what people are thinking – there is already a Starwood twitter map. Such applications are revolutionizing travel planning, by developing and distributing information and thus empowering the consumer.'
Virtual worlds[5]	The global virtual conference and trade show market is predicted to reach $18.6 Billion over the period 2010 – 2015, with a CAGR of 56%. Several destinations are already in Second Life, offering potential visitors a try before you by style experience.

Technology	Industry implications
Relationship Management	
Evolution of Customer Relationship Management (CRM)	At present, there is a separation for many hoteliers between their CRM applications, their social media activity and the actual data gathered about what a customer does in the hotel. Over the next decade we will see an evolution such that more attention is paid to data mining both the onsite experience and customers social media profiles in order to integrate them into CRM activity and better target marketing communications, offers and rewards.
Tablet computers	The rapid growth in popularity of devices such as the iPad creates the potential to develop guest apps specifically for these device formats. They can also be used by hotel and meeting staff to provide real time information to customers and event participants.
Wireless broadband[6]	Gerd Leonhard suggests Wireless broadband could reach 3-4 out of 5 people on the globe by 2015-2018. This has enormous implications for global commerce, communications and mobile advertising.
Virtual travel	Guests may increasingly want to experience every aspect of their trip virtually before making a booking – from viewing their particular bedroom to trying out the pool. Already video and environments like Second Life provide much of the desired visual and audio experience. By 2020 devices such as data gloves, and mind control headsets could be used to recreate a full sensory experience. The potential already exists to combine the live and virtual experience in interesting ways. For example, a Japanese resort in the city of Atami offers young men a tourism destination to experience with their virtual girlfriends. The experience is based on "Love Plus," a game which encourages players to develop long-term relationships with virtual women. The Ohnoya hotel offers traditional rooms which feature two sets of futon beds and a barcode panel that allows the men to visualize their girlfriends[7].
Speech recognition and language translation	Google[8] already provides language translation for search and hopes to have basic translation facilities on its Android mobile phone platform within a couple of years. The increasing capability of speech recognition systems and language translation technology offer a range of service opportunities to hotels. By 2020 customers could be able to control and configure all the technology in their room using a range of voice commands. Language translation could be used to assist guests and staff everywhere in the hotel from arrival and check-in through to dining and other facilities.
Intelligent agents / Software assistant	Advances in Artificial Intelligence are enabling the development of autonomous software agents that can work independently on our behalf in the online environment. These agents can perform simple acts such as routine searches or undertake more complex tasks such as spotting patterns and responding to enquiries.
Semantic web[9]	The Semantic Web is the extension of the World Wide Web that in essence becomes your web butler. By connecting seemingly random bits of information on the internet, in new ways, it offers a new way of creating and sharing content. The semantic web would enable better searching of the web, further closing the shrinking knowledge gap between both previous and future guests, as well as between management and guests (in areas such as pricing for example).
Intelligent web	The Web is evolving into an intelligent system that understands spoken inquiries, gathers relevant information, and forms meaningful, focused answers. More intelligent search engines are appearing, and intelligent agents being developed by DARPA and others are able to infer context as they link users and information.
Personal Technology	
Explosion of personal display devices	While there is growing consensus that the mobile phone or its successors will be the main device through which we access the internet, the nature of the display is likely to evolve. Pullout screens, roll-up screens, projection screens and 3D displays are the most widely expected display media. However, there is also the potential for hotels to offer 'any-surface screens' where you connect your mobile and have a larger screen interface.
4G / 5G Phones	Each new generation of mobile phone technology offers an ever-broadening array of functionality. The 4G phones expected to hit the market in the next 12-36 months promise wireless broadband speeds of 50-100Mbps (megabits per second) – compared to the average 2Mbps for current devices. This would allow for the download of complete movies in a matter of minutes. Claims for 5G suggest in could deliver up to 1 Gbps (Gigabit per second)

Technology	Industry implications
Personal Technology	
Augmented reality	By overlaying digital information over real world objects, augmented reality offers the potential to enrich a range of human experiences (figure 5). Conde Nast Traveller magazine has already created four augmented reality travel apps for the iPhone, offering guides to Paris, Barcelona, New York and Rome. Each app promises more than 500 listings for restaurants, bars, hotels and tourist hotspots, with filters so you can sort them by area, style and cuisine[12]. In the survey 76 per cent expect that by 2020 'augmented reality will be part of everyday life and in widespread use by the travel and tourism industry'.
Mind control headsets	Offering the ultimate in personalisation, a range of mind control headsets have now come to market from developers such as Emotiv (figure 6). These wireless headsets enable you to control computers, video games and even objects such as toasters through the thoughts and facial expressions of the wearer.
Intelligent interfaces	Advances in speech recognition, artificial intelligence (AI), and computer power suggest the old computer interface (keyboard, mouse, etc.) may yield to an intelligent interface in which we simply converse with smart computers.
Gesture interfaces	Well before 2020, the traditional computer display screen could be replaced by the kind of display made popular in the film Minority Report (Figure 7). The challenge for hotels will be the visual clutter that might be created in public areas if everyone is using heads up displays and gesture interfaces.
Heads up displays	A stage on from augmented reality is notion of heads up displays (figure 8). In a hotel setting, a customer might be enquiring about the price of a room at the check in desk while their heads up display is scrolling through users' reviews of the hotel and comparing prices with other hotels in the area. The display could be projected on to contact lenses or glasses worn by the individual – although it could also be projected into a space in front of the individual.
Guestroom Functionality	
Guestroom technologies	A wide range of technologies could make their way into the guestroom of the future. GUESTROOM 20X[13] is a bi-annual event that seeks to profile possible technologies that could make it into tomorrow's hotel room. Examples of applications profiled in the latest event include: • Centralised and personalised control of media, lighting and temperature • A canopy bed with an all-in-one multi-media experience • A bathroom mirror that broadcasts the day's weather, news and health data • Door mounted digital cameras to see who's calling • A vibracoustic spabath.
3D / 4D TV	A variety of 3D systems have come on the market and hotels are evaluating what their strategy should be – ignore, adopt in every room or provide on demand. The next generation of 4D TV's will include functionality that stimulates the senses through smell and tactile interfaces.
IP telephony	IP telephony opens up the potential to offer a wide range of new differentiated services for customers in hotels and resorts and the market is forecast by ABI Research to grow from $869 million in 2008 to over $2 billion by the end of 2014. They also suggest adoption of these systems will gradually move from high end properties to mid-range hotels. Such applications would for example enable accurate tourist information to be downloaded about the precise spot at which a guest is located. An example is the handheld multimedia device available at the Berlin Wall that provides image displays, video interviews and relevant information at different points along the Wall.
IPTV	IPTV's potential to enhance the guest viewing experience is becoming clearer. A 2010 report from MRG suggests that over 11 million hotel rooms and 1 million airline seats could be IPTV-enabled. They estimate that hotels and airlines alone account for a US$1.9 billion global market by 2012[14]. IPTV broadens choice and offers the potential for a range of interactive services such as the ability to make instant purchases of items appearing in a TV programme - which could create additional revenue streams for hoteliers.
Smartphone room access	Our personal mobile device will also act as our room key. Guests who select the Holiday Inn's "fast check-in'" service download the Open Ways' app and receive a text to their phone which contains a unique sound code that's used to unlock the door. The code resets after each usage[15].
Sensor-based room management	Sensors could allow for far more efficient management of a property. Hotel 1000 in Seattle, Washington, has a Guest Sensor, which notes when guests enter or leave a room, and adjusts the room settings to save energy. It can also inform hotel staff when the room is free for servicing[16].

Technology	Industry implications
Guestroom Functionality	
In room concierge	Over the next decade, a range of devices will be used to provide a personalised concierge service. These could include On-screen on-demand virtual or real concierges, computer tablets or pads, and ultimately personal robots. The Berkeley Hotel in London and The Plaza in New York City offer iPads in all guest rooms and suites. The Plaza's virtual concierge application offers a multimedia video welcome and enables guests to read newspapers, browse the web, order room service, book restaurants, communicate with the live concierge, request wake-up calls, check airline schedules, print boarding passes and explore NYC destination guides[17].
Personal robots[18]	NextGen Research forecasts worldwide demand for all-purpose service robots will reach $15 billion by 2015, or roughly 5 million robots per year. (CNET News 5/27/09). Robots could perform as in-room butler, and core hotel roles from porter to room cleaning.
Meeting Support	
Video conferencing / Telepresence	High quality video conferencing has been rebranded as 'Telepresence' and is now considered suitable for a range of business meetings – offering savings in travel time, cost and CO2 emissions. Telepresence Insight reports that "The number of Telepresence rooms installed at companies has grown from an estimated 2,000 globally in 2008 to around 3,500 in 2009." Both Marriott and Starwood Hotels are installing Cisco Telepresence technology in some of their hotels[19] in the search for ancillary revenues.
Virtual meetings and Hybrid events	Hotels may seek to offer the functionality to event owners to deliver virtual events and integrate online participants into live events. Applications include broadcasting of audio-visual content, 2D and 3D trade shows and virtual participant interaction.
Guest Services	
Self service kiosks	Whilst the use of kiosks has proliferated in the hotel environment, the question going forward is whether customers will prefer to perform the same functions via their mobile device – rendering the kiosk potentially redundant. A July 2010 study by IHL Group estimates at least $740 billion of transactions at self-service kiosks in 2010[20]. An April 2010 study from Cornell's Center for Hospitality Research (CHR) found that self-service enhances guest satisfaction and improves hotels' financial results with a time lag. However, when problems occur with self-service systems, guests are reluctant to return or pay premium rates[21]. The opportunity with kiosks is to add additional functionality and provide personalised offers that could generate additional revenues.
Interactive displays[22]	Interactive coffee tables, windows and even walls could all enhance the guest experience. Even skin has become a display surface, with scientists creating a system that uses hands and arms as touchscreens by detecting the various ultralow-frequency sounds produced when tapping different parts of the skin. Skinput uses microchip-sized projectors to allow for interactive elements rendered on the user's forearm or hand.
Interactive surfaces[23]	Interactive coffee tables, windows and even walls could all enhance the guest experience. Even skin has become a display surface, with scientists creating a system that uses hands and arms as touchscreens by detecting the various ultralow-frequency sounds produced when tapping different parts of the skin. Skinput uses microchip-sized projectors to allow for interactive elements rendered on the user's forearm or hand.
3D Displays / Touchable holographs	The use of 3D holograms is becoming more common to beam speakers in to events and create advertising installations. A University of Tokyo has gone a step further to create a 'touchable holograph' display using an ultrasound device to add tactile feedback[24]. This offers the potential to create virtual concierges and experiential installations in public spaces.
Haptics technology	Haptic interfaces allow users to feel virtual objects on a computer, giving an illusion of touching surfaces and moving objects around. The benefits may be similar to those afforded by touchable holographs.
Near Field Communication (NFC)	NFC is a mechanism that can be used to exchange information simply by waving a phone over a contact point or another phone. Applications could include guest identification, payment, verification and downloading travel applications from foyer kiosks.
Quick-Response (QR) codes[25]	These 2D bar codes are designed to be displayed and read by current mobile phones. QR codes are approved by the TSA for electronic boarding passes. QR codes can be used for check in, security, marketing and offers.

Technology	Industry implications
Business Operations And Management	
Biometrics (E.G. Voice / Facial recognition)	A range of biometric technologies are now available from fingerprint recognition to iris scanning. These all offer the potential to speed up check-in and check-out processes. They can act as 'personal information passport' providing access control to bedrooms and hotel facilities and for completing transactions in restaurants, shops and leisure facilities. The key questions for hotels are whether the expense is warranted and will the customer see it as an unwelcomed intrusion on their privacy?
Cloud computing	Cloud computing implies renting data servers and software applications over the internet from vendors on a Software as a Service (SaaS) basis. This offers significant potential for greater flexibility in upgrading and changing applications whilst reducing the costs of the servers on which both the applications and data reside. Nick Price, the CIO of Mandarin Oriental, says any vendor wanting to do business with Mandarin must present a cloud computing solution[26]. He envisions the hotel industry running a shared data model, with a centralized database holding all customer travel records across the industry, accessible by hotels and consumers from anywhere.
RFID[27]	Radio frequency identification (RFID) is a way of tracking and identification using radio waves. RFID market to exceed $8.25 bn in 2014. RFID tags are already being used to track delegate behaviour in exhibitions and could be applied to track guest flow through the hotel.
Ambient intelligence / Sensor networks / Swarm intelligence (Analysing group behavior)	Ambient intelligence describes a world where literally every object has an embedded sensor or tag. Hotels will contain a massive interconnected set of sensors and RFID tags that monitor everything from movement to energy consumption and literally track every guest movement by communicating with their room access device or mobile. These sensors will literally be embedded in every object and provide real time intelligence on where guests are, potential bottlenecks and temperature changes. At a macro level, this would enable ever more appropriate physical design and placement of facilities. The CityCenter Hotel Las Vegas' sensor network recognizes as a guest approaches the room and configures the lights, curtains, TV channels, climate control, and music to their preferences.
Hybrid platforms	A number of web-based tools such as Google Wave are emerging to support real-time communication, document and information sharing and collaboration between people within and across organisations.
Monitoring and surveillance	An effective network of sensors also provides for more effective monitoring – and for example – tracking of your children in a resort. James Harrison of Pestana reports that 'Eden Resort in the Algarve (not a hotel, but a destination for families - which we will see more of) has complete TV interaction, from ordering food to tracking children, including alarms. If a child goes too near pool or boundary, the parent is notified. It's a bit scary big brother stuff but as families travel further and further abroad this will help maintain 'comfort' levels for parents.'
Knowledge mining	Increasingly sophisticated analytical algorithms and tools are enabling the mining of data to extract patterns and inferences that tell us for example more about customer behaviour.
Predictive analytics	Analytic techniques are being developed that enable us to predict future behaviour of individuals, trends and even disease spread. Google for example is able to spot potential disease outbreaks earlier than the health authorities. Such techniques could be used to predict possible hotel demand based on the social media discussions that follow travel programs.
Data security	As more and more customer data is gathered and stored by hotels in order to deepen personalisation, so concerns will rise about how securely that information is stored. A 2010 study by SpiderLabs found that 38 percent of the credit card hacking cases in 2009 involved the hotel industry. The sector was well ahead of the financial services industry (19 per cent), retailing (14.2 per cent), and restaurants and bars (13 per cent)[28]. The report notes that "organizations large and small were found to be moving forward with plans to implement new technology, while leaving basic security threats overlooked."
Remote sensing security[29]	Security could become a key differentiator for hotels. Terahertz, CCTV and other remote sensing technologies offer the potential for unobtrusive detection of explosives, weapons and drugs.
Crowd farming[30]	Gettys' concept of 'crowd farming' involves floors that are designed to harness the energy of compression as guests walk over the floor surfaces in the higher circulation spaces. New innovative options of energy generation and storage are likely to feature in many hotels.

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9. About Fast Future Research

Fast Future Research is a UK based futures research and consulting firm helping clients around the globe to spot, analyze and respond to the trends, forces and developments that could shape the next 5 – 20 years. Fast Future specializes in studying the hospitality, travel and business events sectors and is currently running the multi-client sponsored Convention 2020 study and the Future Convention Cities Initiative. Fast Future's book – Designing your Future was published in 2008.

Fast Future has undertaken assignments for clients in the public and private sector in over 40 countries on six continents. Clients include 3M, ABN Amro, Amadeus, The BBC, BT, British Aerospace, Bayer, Citibank, DeutscheBank, Diamond Trading Corporation (De Beers), DHL, EADS, Electrolux, Ernst & Young, Fujitsu, GE, HBOS, IBM, ING, Intel, Intercontinental Hotels, KPMG, Marks and Spencer, Morgan Stanley, Nakheel, Nokia, Nomura, Novartis, Ocean Spray, Orange, Panasonic, Pepsi, Pfizer, Playtex, PwC, Qatar Airways, Royal Bank of Scotland, Samsung, Saudi Supreme Commission for Tourism, Shell, Siemens, Thames Water, and Yellow Pages, a number of travel and meetings industry associations and governments in the US, UK, Finland, Dubai, Nigeria, Saudi Arabia and Singapore.

Fast Future's team and extended network comprises a mix of internationally recognized professional futurists, experienced futures, strategy and innovation consultants, respected futures researchers and highly capable graduate research assistants. The team brings experience from across the strategic management, futures research and innovation spectrum encompassing:

> Research and consultancy using a full range of strategy, futures and innovation methods and tools

> Development of methods and approaches acknowledged as best in class by their peers

> Client training on scanning, futures, strategy and innovation

10. About Amadeus

Amadeus is the chosen technology partner and transaction processor for the global travel and tourism industry. The company provides distribution and technology solutions to help its customers adapt, grow and succeed in the fast changing travel industry. Customer groups include travel providers (airlines, hotels, car rental companies, railway companies, ferry lines, cruise lines, insurance companies and tour operators), travel sellers (travel agencies) and travel buyers (corporations and travelers).

Amadeus operates under a transaction-based business model that offers IT solutions to virtually all players in the travel industry. The Amadeus system processed more than 670 million billable travel transactions in 2009.

Its solutions and services are used by its customer groups in different ways. Over 90,000 travel agency points of sale and more than 55,000 airline sales offices use the Amadeus System to run their business. Many of the industry's other leading travel service providers use Amadeus' modular technology to optimize their distribution and internal operational requirements.

Amadeus is traded on the Spanish Stock Exchanges as of 29 April 2010 [AMS].

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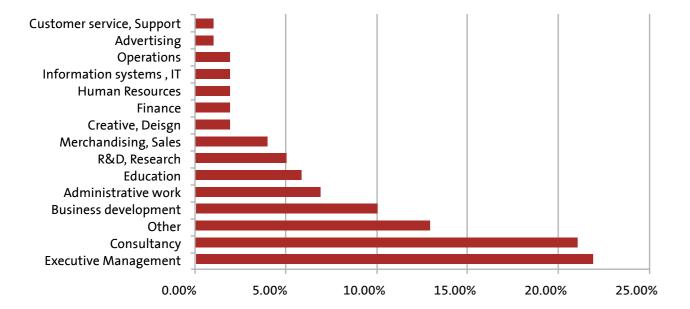www.carlsonhotelsmedia.com/article_display.cfm?article_id=597

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12. Survey Analysis

What is your primary job function?

The survey was conducted in August 2010 and promoted to Fast Future's global network and via a number of hotel industry discussion forums on the social networks.
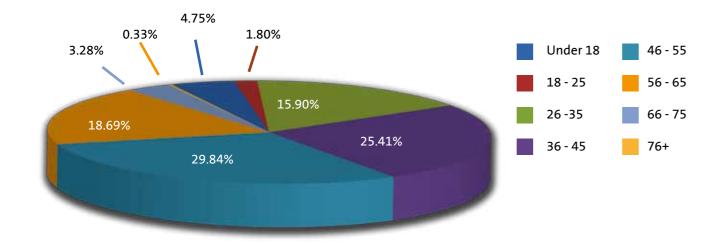
A total of 610 responses were received

Region

The largest group of respondents came from Europe (50%), followed by North America (18%) and Asia (13%).

A total of 610 responses were received.

Age Cohort

Most age cohorts were well represented in the survey.
74% fall within the 36 to 55 range, whilst the 46-55 range is the largest group with 30% of the total.
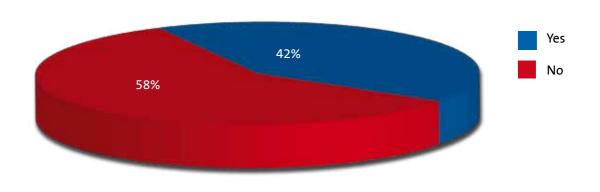
A total of 610 responses were received.

Industry Split

Of those that answered, 42% work in the travel industry and 58% work in other sectors.

A total of 610 responses were received.

Travel Industry Sector

Within the travel sector, those involved in the accommodation sector, consultants and visitor and convention /tourism promotion bureaus were the three largest groups of respondents.
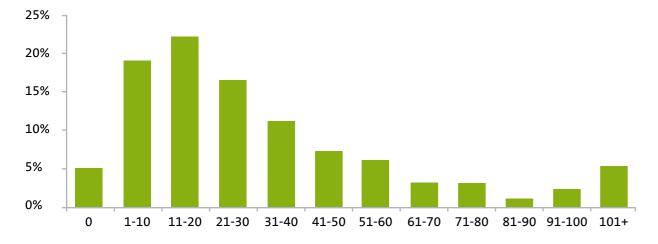
A total of 299 responses were received.

Hotel Usage – Leisure

74% of respondents spend between 1 and 20 nights in hotels per year for leisure purposes. The largest group of respondents (40%) spends 11-20 nights in a hotel.

A total of 610 responses were received.

Hotel Usage – Business

49% of respondents spend between 11 and 40 nights in a hotel on business per year.27% spend more than 40 nights a year in a hotel on business. The largest single group was those spending 11-20 nights (22%).
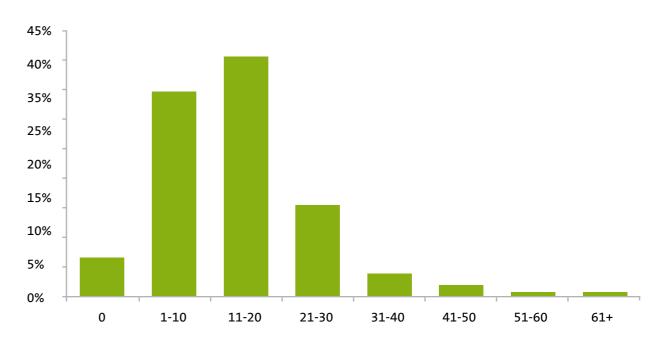
A total of 610 responses were received.

Hotels 2020:
Beyond Segmentation

Amadeus has commissioned Fast Future Research to undertake a study on the drivers of change for the globally branded hotel sector over the next decade and the resulting implications in terms of hotel strategy, brand portfolio, business models, customer targeting and innovation.

November 2010

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