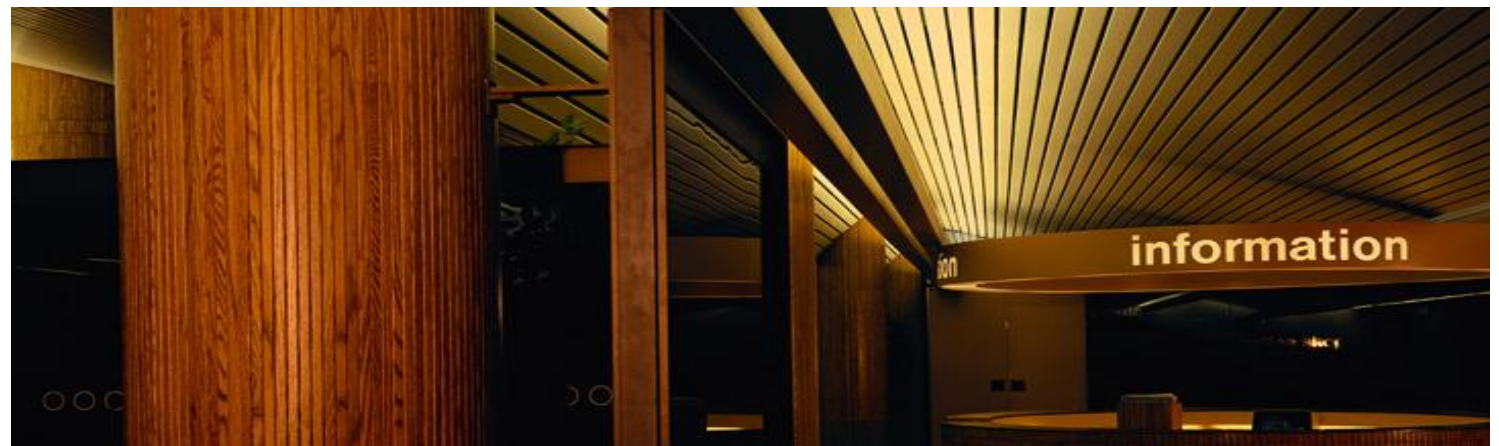
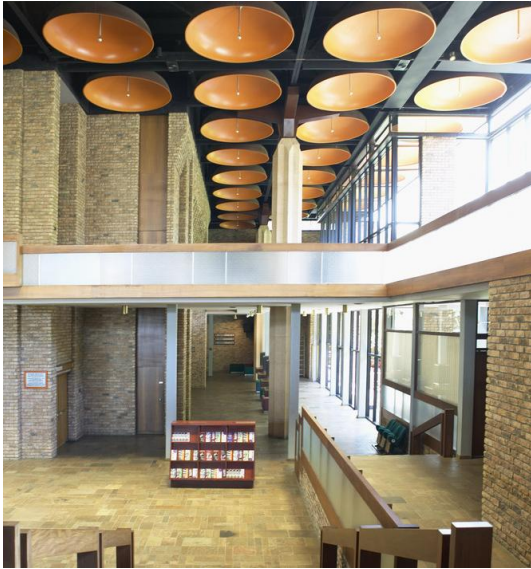


How to invest in guest facing technologies

Stay safe in disruptive times

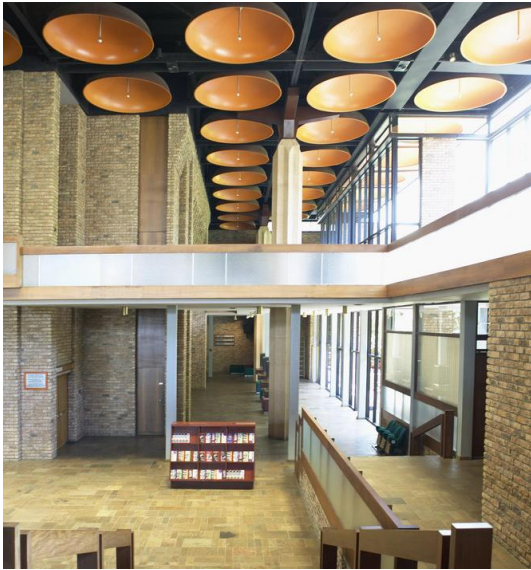
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How to invest in guest facing technology when the times are a changing...

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How to invest in guest facing technology when the times are a changing...

Great times for gadget lovers, not so great for hotel owners and management companies.

For everyone who has some interest in technology and gadgets the times we live in are a real blessing. Internet disrupts industry after industry and offers fertile ground for applications unknown only a few years before and already widely used today.

Making calls is only one of many features of a phone nowadays and complete new tech categories appear on the landscape - a tablet is no longer only something to serve drinks for example.

As a result a technology interested middle class household gathers more computing power than what the Apollo mission had when they flew to the moon.

Really nice times if you have some interest and the money to afford new toys you like and keep pace with the ever shrinking replacement cycles.

On the other hand, if you have to decide **on the long run** for a **whole hotel property** where every room resembles a household with **very different inhabitants** from day to day: OH MY GOD!

At least if you position yourself in a category where the provision of the absolute basics isn't enough things get very quick difficult. Let's have a look at some of the reasons.

Disruptive technologies

After years of friendship, some ups and many downs, Internet and TV happily announced their engagement at last. Sure, they will marry but unfortunately they leave us still unclear about the details - how will their future look like?



Will there be some sort of integrated Smart TVs produced by the big CE players? If yes, which of all those proprietary different platforms (LG/Sharp/Philips Net TV, Samsung Smart TV, Sony Bravia, Panasonic VieraCast to name but a few) will be the winner?

Or will the marriage come through intelligent Boxes? If yes, which one (Boxee, Roku, Western Digital etc.)?

Or will the more internet affine partner in this relationship wear the pants? If yes, who (Google TV/Android, Apple TV/iOS, Microsoft xbox live)?

As a matter of fact we know little about this marriage, however going further we have no idea about the upcoming kids. It will be interesting to see which innovations/applications will be developed

based on this infrastructure. "Only" better/more direct access to content (speak Netflix, Youtube etc.)? Also Skype via TV? Social TV with or without companion screen device? And on and on it goes...

Those are interesting and disruptive times for whole industries where traditional players like the CE manufacturers all of a sudden compete with new rivals who want to secure their piece of the new to be sliced cake. And if those rivals are Google, Apple, Microsoft there is something to think about. There is very much going on, yet so little known about the result. That is exactly the kind of situation one doesn't like if you have to decide on the long run.

And that is just the result of unknown details coming from the combination of TV and Internet. Have I mentioned 3D? Ultra High Definition? OLED?

Shrinking replacement cycles at consumer homes

Do you still remember those days when you had 1 TV in your household and it was the one in the living room? Back then it was not too difficult to exceed my expectations when I came into a hotel room. Afterall, air conditioning, Satellite TV, Video on Demand - I saw it first in a hotel room.

There is very much going on, yet so little known about the result. Exactly the kind of situation one doesn't like if you have to decide on the long run.

We all know those days are long gone and some argue that one should try to establish that experience once more. In short provide a better, more futuristic equipment in the hotel rooms than those the guests have at home.

That is a very tough one to say the least. Digital technology plays an increasingly important part in our lives, innovation and adoption is faster and faster. All of this resulting in more devices and shorter replacement cycles, consumer spendings for consumer electronics are on the rise.

If you buy a TV today it will last for 15 years up? Yeah, maybe still works fine in some secondary room in your house like a study, guestroom or the like, typically as the last one in the row of then 4 or 5 screens in the house. But in your hotel room? No way.

Cutting edge, future proof technology today, hopelessly outdated tomorrow...

New categories evolving

Apples iPad established a whole new category of technology: the tablet device. Already widely adopted the prospects for its successors and Android cousins are even better.

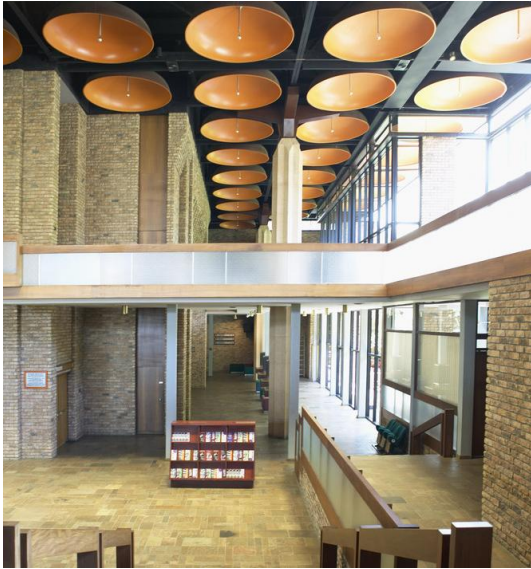
And since it is quite perfectly suited to present Hotel services and the like one could think about to provide one in every guest room. Or at least how to integrate those, which are brought along by guests.

And what about connectivity panels? They are still a quite new part of in-room technology - no wonder, what would you have wanted to connect a few years back? And although new, there is already some talk how long we will really need them. Doesn't already today everybody want to connect wireless?

One last change: who would have ever thought that air-condition and lighting would be part of the tasks of the IT team in a hotel opening?

So in the middle of all those disrupting technologies, shrinking replacement cycles and new categories lets try to get some order in this ever growing chaos and concentrate on the most important parts:

- [\(IP\)TV](#)
- [Internet access](#)
- [Integration of Smart devices](#)



IPTV offers far more than standard TV

Hotel IPTV- but why?

There are very good reasons to go for it

First we will do a few short chapters about why it is a good idea to marry TV with IP/Internet. If you are already sure about this, just skip those chapters. If you think this is a bad idea because it was announced at least hundred times and never happened, read them twice. And if you think a abandoned office PC in a dark corner of your lobby offering your guests Internet is enough for the years to come, ask your children for some help.

IPTV is ready for primetime

The marriage of TV and Internet was announced many times but has never gained any traction. So is it a bad idea? No. New technology is not just a good idea by some genius. It needs infrastructure to go along, to support it. We all know Internet on mobiles. Do you remember WAP? Slow connection, small monochrome displays, awful

user experience. Is the Internet on mobiles for this reasons a bad idea? Ask any smartphone user or have a look at any statistic about the **exploding numbers of mobile internet usage** if you don't have the answer by yourself.

Even Steve Jobs had the great idea about the iPad long (now almost two decades) before. Anyone remembers the Newton? Just compare the commercials for the [Newton launch](#) and for the [iPad launch](#) and you will see very similar idea, but as we all know very different success.

Today IPTV is ready for primetime, at least in a hotel environment where you have full control over your network. But it isn't the broadcasting technology where IPTV has it strengths - its advantages lay in the combination of TV broadcasting with additional functionality enabled through IP.

IPTV is more expensive - really?

Yeah it's true. But sometimes you have to kiss the frog if you want a prince. And even more so, when the by far greatest part of the investment is already done for the frog. A headend to distribute the TV signal, some kind of network for distribution, the TV set in the room - everything is already needed for plain TV. And almost nobody nowadays denies the importance of Internet access in the room (be it wired and/or wireless is another discussion). So that is given too.



Why would someone invest 80 - 90 % and is satisfied with the frog "standard TV" who has only produced costs so far? Why don't finish the investment in order to transform the frog into a revenue generating IPTV prince? All those wonderful advantages from branding over web integration to checkout and room control aside: one of the most important factors is additional revenue.

No one would build a top restaurant, with design furniture, beautiful china and Riedl glasses just to provide some place for guests to consume their own

meals and drinks. Only high costs, no revenue so far. Solely because a restaurant with kitchen is more expensive? It's time to change the way we think about hotel tv accordingly.

Sometimes, revenue missed is the biggest cost factor, however neglected during investment decisions. So let's have a look what the prince IPTV has to offer.

IP functionality

First let's have a look at those additional functionalities enabled through IP. Without any priority and not claiming completeness - just a few examples to stimulate imagination:

Bill/folio view and easy check out via TV, set a wake up call, channel list arranged according to the nationality of the guest, transmit the conference schedule to all attendees via group code, automatically adapt the design of the UI according to the brand of the conference host, provide room-control (aircondition, lighting, drapes etc.) via TV, make it easy for housekeeping to communicate room status, easy integration of guests own content, stream content to or from tablets, let guests use smartphones as remote controls...

That's already much more than a standard hotel tv set is able to do today.

Who would do without a kitchen in a restaurant because it is more expensive with it?

Wait there is more - the Internet

But there is far more to gain if you also put everything the Internet has to offer into the game.

You do have international guests? There is little which makes them more happy than to have **access to their accustomed channels**. And fortunately almost all important channels worldwide offer some kind of **catch-up TV via Internet** nowadays. You can't compete with your more or less extensive channel list with the variety out there.

Or what about VOD content? More and more guests are used to the offerings of Netflix, Hulu, Lovefilm, Amazon instant Video, maxdome, iTunes and so on. Guests have their credentials so let them use them and enjoy. And - to be clear - it is not about long-form content only: Youtube counts 4 billion views (no, that's not per year, that's daily) - [still growing strong](#).

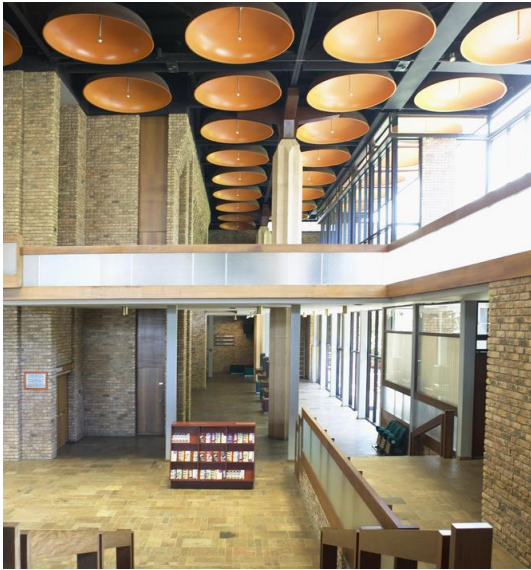
Let's just move on to all those new services out there, be it social media like facebook (with more than 700 million users already) or twitter, music streaming via spotify, video skype, access to own media stored in the cloud and whatever will come down the road.

Or provide easy access to relevant information like destination sites (eg www.timeout.com), the nearby museums or cinemas, the airport for checking departure times and possible delays - you got the idea.

All of those sites and services are directly accessible via logo icons sorted in different categories to simplify handling. And since you can't anticipate every long-tail site your guest may want to visit they are certainly supplemented by a full fledged browser to open up the whole web.

Until now we "just" talk about enhancing guest service and/or reducing costs - no direct additional revenue yet. So let's have a more detailed look at using IPTV for marketing purposes.

You can't compete with what the Internet has to offer – but why should you after all?



The Digital Divide

Hotel IPTV- the Marketing part of the game

There are lots of new opportunities waiting to be explored

Be aware of the Digital Divide

Hotels are a quite special playground. As a "normal consumer" you would look for technology which suits your needs, compare vendors, hopefully get educated by retailers, friends, internet research, buy the stuff and invest some time in your ideal, individual set up and to get used to it. **Nothing of that happens when a guest stumbles in your hotel room.**



Just to begin with, there is nothing like "**the guest**". One generation ago there were more or less just two groups: those who watched TV and

consumed pay per view and those who just watched TV. Today? On one day there are my parents in the room, struggling in a strange surrounding with an unfamiliar remote control, searching in a whole different channel listing than at home (most of them unknown) to find that rare german speaking channel they like (or at least know) to watch the news. The next day you'll have a young business traveler, already accustomed to catch up tv, video streaming, switching around the different options and functions with ease and maybe wowed by the video skype experience he had the first time via TV. Of course he is bringing his own content (as a fallback), maybe trying to connect via DLNA.

Technology, and most important the Userinterface (UI) which is able to provide **both groups** (and everyone in between) a perfect experience is key. Conclusio: you have to have the "digital divide" in

mind when thinking about the user interface, not just the techies out there.

Lets stay for a moment with the UI. More or less every important CE manufacturer + a few new market entrants try to define a unique UI + functionality because it offers a new kind of brand differentiation opportunity which they didn't have before. At least until now, there is no common user experience as you may find it for example in iphones and android based smartphones. They look different but you still can take them and begin acting. Or to put it in another way: **there are lots of different designs of forks out there, but rarely one has to think about how to use them.**

Having my parents (and the boomer generation) in mind, it has to be dirt simple to use the TV with a standard remote control (better still with as few keys as possible) for watching TV and finding the preferred channel. With all those different approaches out there, I couldn't say today which one I would trust to fulfill this requirement best (if any).

Some best practices to look at are much easier to define: ensure quick responsiveness, smooth and easy navigation, readability of menu items, avoid cluttered screens with far too many options. And make use of technology to simplify your guests life. Just to give you an example: let the system memorize the channel usage and provide them as favorites (or "recently watched"). Don't forget, **content may be king, but the Userinterface certainly is its throne!**

New Marketing opportunities - use them

Beginning with an intangible but nonetheless important issue: branding. Especially in the high end hospitality world **branding is VERY important.** If you're coming from the marketing side you'll know it, if you're more technical biased just believe it. Take whatever luxury brand you like, they put tremendous effort in building their brand.

So what is more obvious than using those wonderful HD Displays already installed in every room for branding purposes? It is not about Samsung, LG, Panasonic or Sony. It is also not about the Hotel TV integrator and his brand. **It is about your brand and a high-end userinterface is a perfect way to enhance it.** Whoever has seen once, what sophisticated, exclusive and individual appearance you can get on the screen knows what is meant.

Now let's move on to the more tangible effects. Sure, there is still "traditional" video on demand creating substantial revenue, although decreasing. Certainly this shouldn't be the main reason for IPTV. And let's assume there is potential to generate some revenue with hotel services - be it restaurant, bar, roomservice, spa, golf course or whatever.

However, those potential isn't always translated into real revenues and there are at least two reasons for that.

There are lots of new Marketing opportunities – so why not make use of them in the most efficient way?

First, more and more services offered combined with a decreasing length of stay create quite a **communication challenge**. Apart from the check in process (which isn't suited very well for this purpose) and printed info in the room there isn't a lot you can do to make your guest aware of all the possibilities offered.

Second, the hotel industry traditionally isn't exactly famous for its in-house marketing efforts. The by far main focus in marketing and sales has always been "heads in beds". That's fine, after all that's the core business. But - and this is a big but - even when the guest already entered the building he is **still in the sales cycle!**

This fact seems to be almost ignored quite often. It sometimes almost makes me want to cry if I see very few guests grow lonely in wonderful (and expensive) designed hotel bars, staffed with qualified (and expensive) barmen - in nearly fully booked hotels. Or - often even worse - having a look at the utility rates of those splendid (and expensive) hotel spas.

And all that with **preconditions which could hardly be any better**: no expensive promotion to unknown with lots of waste circulation - on the contrary! The guests are already there, they have already voted for your property, they are a perfectly pre-qualified and captive audience, they are more than receptive for attractive offers and have disposable income they are willing to spend for services and experiences.

And the advertising medium is a central focus point in every room which is already there. In any other circumstance one would call that **marketers heaven!**

However, the question remains how to make the best out of this opportunity. Some options are almost self-explanatory: an always up to date roomservice menu in the guests language with attractive and mouthwatering images generates more revenue than a worn out printout in some strange unknown language. Also the presentation of spa treatments with short videos increases attractiveness and reduces threshold fears in a way a brochure never could.

But things get really exciting when you look at how easy it gets to communicate with guests via TV (or Digital Signage, Smartphones, Tablets) in a very **timely and precise** way. Think of an unintrusive 60 sec RSS Feed at the lower part of the screen: "Happy hour at our Sky Bar starts in 15 minutes - relax with lounge music and enjoy the sunset with our award winning cocktails! As a honored member of our loyalty program we would like to invite you for your first drink!"

Bad utilization of your spa tomorrow morning? Send a short prepared feed to the rooms: "Time for pampering? Book your dream treatment now for tomorrow morning and enjoy a second treatment of your choice with 50% off!"

Don't forget your guests are still in the sales cycle and you are in a position not far from what could be called „Marketers heaven“

Or what about that: "Everything looks better after a trip to our spa - enjoy 20 % off for any treatment booked until noon!"

You have a golf course? Here we go: "Your doc is right: fresh air **will** do you good! Why not book a tea-time for tomorrow?"

Another opportunity to encourage impulse buying are so-called pop-ups which can also be controlled precisely. To all rooms, only to the suits, dependent on group codes, 10 minutes after switch on or only to watchers of a certain channel - a "Popcorn and beer" package for all football fans on Championsleague evenings for example.

Already the welcome screen offers not only place for uninspired "welcome messages" like "Hello Mr. Krobath" but for simple and effective promotion: "Dear family Huber, we are very pleased to have you with us and wish you a pleasant stay! To celebrate the day we recommend a 4 course dinner in our exclusive Aquila restaurant - just push OK to reserve a table."

Or equally timely on the day before the departure: "Take some holiday with you - special offers from our cosmetic line are waiting for you in our hotel shop." No shop in your hotel? How about that: "Become a member of our loyalty program now and with a little luck you can win a 3 day stay in our partnerhotel xy in St. Anton!"

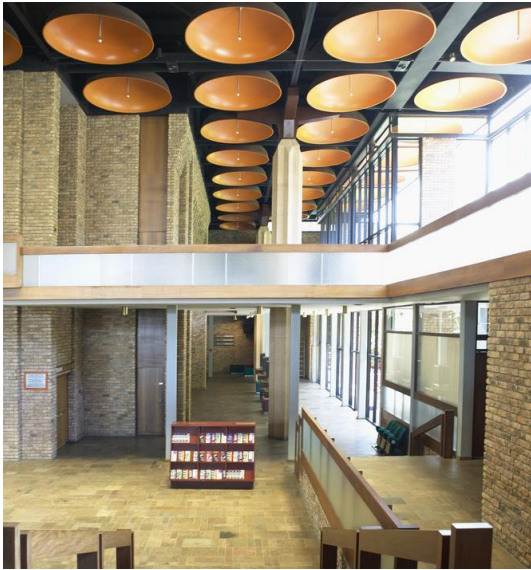
The point is clear, the possibilities almost endless. Make a drawing of loyalty points for all guests willing to test your brand new spa treatment, promote local partners, advertise your referral program, a special winter offering for your summer guests...

Give your imagination some freedom and make use of the perfect preconditions to communicate your services in a revenue generating way.

Just to be clear: will all those actions let your revenue explode? Sure not. Will they generate a quick positive ROI? Sure yes. Let's stay pessimistic: What about 1 (one) additional treatment sold per room per month? Or an increased average revenue of just € 2,-- per guest per day? Really not too unlikely, is it? Ok, then make your numbers for, let's say, 3 years...

Last but no least, there is something very important with the variety of possibilities: how simple and flexible may these be used by the Hotel? Can own content be simply managed? A new submenu? A new promotion for the cosmetic products? The Pop-up 'Popcorn and beer' during the Champions League broadcasting? The quality of the systems is also determined by the **simplicity and flexibility of the CMS** in the background.

**Will your revenues explode? Sure not.
Will a quick positive ROI be
generated? Sure yes!**



Hotel IPTV – but how? The technical part

Is it called „Smart TV“ because you have to be very smart to buy a TV nowadays?

Let them fight their war and stay safe

It is not only about TV anymore. Traditional CE producer and new entrants are fighting a war about different platforms, apps, ecosystems.

I guess the best way to get some ideas, is to separate the different blocks we find in a TV set nowadays.

First the TV, excuse me, the Display

The decision here is still more or less about the same attributes: overall design, size, picture quality, power consumption, optionally 3D capability and connections. Here we are still on the safe side, not that much differences out there. Picture quality is overall very good (HD is a given), size matters but so does the distance between the screen and the viewer. If your room is small enough that a screen

size below 32" is fine I guess you are not in a category where sophisticated in-room technology is very important. But also in 5* suites more than 50" rarely makes sense.

Design is a quite individual decision whereat thin LED screens are surely very popular and are also consuming less power. So what about 3D capability? We don't think it will become a real "must have" within one investment cycle from today. All in all, deciding for a display would not be too difficult. **Unfortunately, it is not only about the display anymore.**

Second we have to look at - how should we call it - the "computing part".

As always we have hard and software. And regarding hardware we have some processing power and memory.

First of all lets think about if it is a good idea to put all this stuff **inside** the display. Lets face it, we have components with quite different development cycles. Long living displays on the one hand and processors/chipsets/memory parts which are more or less **a synonym for fast outdated technology** on the other side.

And to be honest, they are not only a synonym for "fast outdated", in combination with software they are **additional points of failures** either. Which shouts for ongoing support, firmware updates and all those things quite common to software companies.

How all those CE manufacturers will handle this cultural change from year long product cycles concentrating on picture quality to supporting a (software) customer within a long ongoing relationship is yet to be seen.

The new Youtube App crashes on your TV? Whom will you call and how fast will the problem be fixed? I really don't know, but I do know **whom your guests will call** ;-)

And there is something more to be aware of: back in those good old MS Windows dominated times (never thought I would write something like this sometimes) each PC from whatever brand came with the same OS/framework pre-installed, which by the way could be altered by yourself (no windows anymore? try linux).

Today we are in the middle of a fight about new standards in this whole Internet TV universe, and no real winner yet. And as far as we can see it today you have to bet on one system without the possibility to change horses in the years to come.

Lets also keep in mind, that **by far the costlier part in this combination is the display**. Which offers comparable, reliable quality following the same standards (HD, 16:9). Why we should blend this with

- rather cheap but fast outdated parts
- which make the whole system more difficult to maintain
- which locks us into an ecosystem we can't change by ourselves and don't know if it will exist in 2 years

is questionable (to say the least).

As far as I know the first CE producer (Samsung) already is aware of the challenges of [upgrading hardware](#) within the lifecycle of the display. How long it will take to see this solution in reasonable priced hotel tv solutions instead of high end models presented on trade shows remains to be seen.

There are arguments for the integrated solutions but for now I would prefer to **stay flexible** which is to take the computing parts out of the equation. Lets buy a nice, big display and have a separate look at the computing parts.

Combining longliving displays with fast outdated computing parts may not be the best idea

Hardware - what does it make possible (or impossible)

One problem with most of the integrated solutions out there in the market (and even worse with them which have already been sold in the last years) is their **lack of real processing power**.

I guess that is something due to the strategy of CE producers. Real (PC like) processing power still costs reasonable money which adds to the BOM (bill of materials). To gain fast market reach - which is of great importance in a new standard war - they try to keep it as cheap as possible which translates to "not that much processing power" or "even much less than every modern smartphone is proud to announce as an important feature".

Is processing power still important? To answer this a **quick look back on computing history**: First we had (very) dumb terminals with all the processing done in some big unit centrally. Then we had PCs with very strong processing capabilities and were happy with all those possibilities which came with them. Not very long after we got accustomed to our first happiness, we realized there were also a lot of problems attached to this decentralization. Where is the data stored? Who maintains all this free floating software chaos on the PCs out there? And since we now do have new infrastructure like "the cloud", wouldn't it be much better to go one step back and have it all (applications, data, processing) done somewhere central once again?

So why should local processing power still be of any importance, when everybody and his dog is talking about thin clients, virtualization, cloud computing and so on? Because there are still **important tasks left which have to be done local** - at least within the reach of a HDMI cable (as long as we don't have other technologies like [HDbaseT](#) available).

Some of those tasks are to provide an userinterface, to have an OS or to run a browser. A real sophisticated userinterface with quick response, HD images, smooth transitions etc. needs horsepower. And so does a browser, at least a real browser. Some of the integrated TVs out there already do have a browser but due to the lack of processing power a quite restricted one. No flash for example. But isn't flash dead? No it isn't, it is just dying. There are tons and tons of (long tail) flash video content out there. What's the use providing me a browser on a TV set which isn't able to play those video content? But that already leads us into software.

Don't restrict yourself with too little processing power

Software - the intelligence

First, to stress it once more, we're lacking standards. Google TV/Android, Apple OS, the different App ecosystems of the CE manufacturers. The only standard out there is a browser. A browser runs on every device. More and more applications are build to run in a browser. New technology like HTML5 will further accelerate this trend. So be sure your browser is really fast and capable of all those new (HTML5) and old (Flash, Javascript) things out there.

Second try to stay flexible and as little proprietary as possible. New infrastructure tends to bring along new applications. One already on its way for example is room control which enables to control many "features" of a typical guest room like lighting, heating, air condition etc. This is just partly a guest service application, it will also be an energy saver or a maintenance helpmate. In the upcoming times of machine to machine communication it will not need the guest any longer to report issues with the door lock, air-condition or whatever.

To make use of those new developments it is always better to have a kind of computing device which is as standard based as possible (speaking proper IP, running linux, have some memory and processing power available etc.).

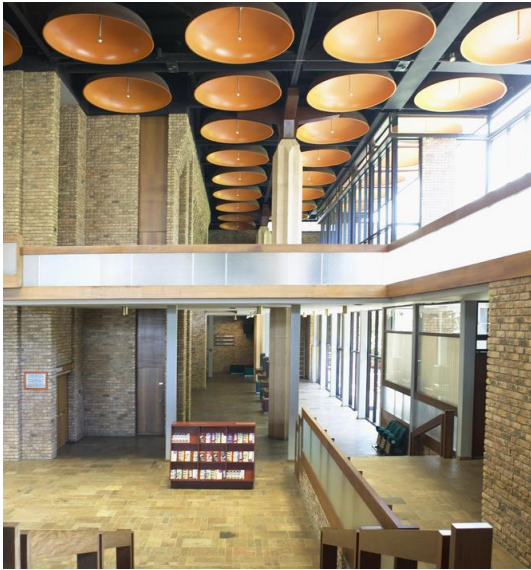
Third think about the architecture. Given the infrastructure available what should be stored/processed in the "local computing device",

what in a management server, what in the cloud. If there is an issue with the management server or some application in the cloud - would the TV at least work properly as a TV or will you have to deal with dark displays in your whole property?

Fourth, consider open source as a viable alternative regarding the media player platform. One of the characteristics of opens source is that a worldwide community of developers secures the ongoing enhancement and improvement. And those improvements are user driven.

New video codec? Ipad integration? What ever is wanted by the majority of the community will be developed. And it is exactly this community of technology savvy users who set the trends. It is very difficult for a single company to match the speed and accuracy of a whole community, even more so when being active in a niche market.

We are lacking standards so stay flexible and make sure you have a full fledged browser



Bandwidth needs will grow and grow

Providing Internet Access

Only few offer superior service. It is very important for guests. That's called a chance!

Be better than the rest

If you don't have the time to read the whole story here is the short version:

- Provide as much bandwidth as you can get and afford
- Have the tools available to manage those bandwidth
- Make sure that the wireless coverage is good enough for the weaker antennas in tablets and smartphones
- When all above mentioned points are confirmed, promote your therefore superior connectivity quality at least as much as any of your other amenities and USPs

Having said that, let's first have a closer look at bandwidth demand. This demand depends on number of guests, number of devices, applications and bandwidth intensity of those applications. In the early days it was the rare business traveler (=

small percentage of guests) connecting to the internet with his laptop (= 1 device), checking his e-mails and surfing the net (= little applications needing connection and if so with small bandwidth intensity). Each of those factors changed dramatically.

Nowadays a much higher percentage of guests – either business or leisure – want to connect to the internet. They bring along many more devices capable and starving for some connection (laptop, smartphone, tablet, game consoles, e-book readers). There are much more various applications out there sitting in the cloud and waiting for your guest coming through some internet connection (CRM tools, VPN tunnels, Google Docs, e-bay, facebook, twitter etc.).

And – to make things worse – some of them are **much more bandwidth hungry** than what we had before (streaming music like Spotify or Pandora,

and especially streaming videos like Netflix, Hulu, Youtube, catch up tv and co.).

So if each factor in the equation (people x devices x applications x intensity) is on the rise you don't need to be a rocket scientist to figure out that the whole outcome will increase dramatically. And for sure we haven't reached the tableau in any of those factors, they will still grow.

Just think about the exploding numbers of tablets, which furthermore are the most "video-centric" devices we have seen so far. Due to all those factors (and some more) the internet experience in hotels is very, very seldom something to write home about in a positive way.

On the other hand a stable, secure and fast internet connection is very high on most guests wish list. Given the exploding demand **and** the importance of connectivity quality for your guests we would strongly recommend to have a close look at what you are offering now and if you could improve this status quo.

Or to put it in another way: if your guests have to use their laptop (too weak antenna in their tablet) and must move to a certain region in the room to get coverage for a **v e r y s l o w** connection, which is cut in the middle of a skype call due to an automatic time-out forcing them to re-login and you charge them \$ 15,-/day/device, most of which goes to your service provider, believe me, **you have a real issue!**

Bandwidth Management and Network Quality

So the ISP(s) of your choice already dig a new BIG bandwidth pipeline to your property? Fine, but don't think that is the only thing you have to do. Most likely bandwidth is still a limited resource why you should be able to control its availability in your property. If and how much you charge for it is another discussion (our opinion on that later) but just for the sake of reliant performance it would be much better to have some kind of steering wheel at hand.

Maybe you may want to allocate more bandwidth in the meeting area throughout the day and redirect it to the rooms in the evening. Maybe you have a group of VIPs on site whom you want (or must) **guarantee** a certain bandwidth. Maybe your main ISP has an issue so you have to rely on your fall back ISP (which you should have) - leaving you with temporarily much lower bandwidth why you want to restrict volume to a certain basic amount per account.

And of course if you do charge for internet connectivity this adds some management tasks too. Who has to pay and what for? Some kind of tiered pricing? If tiered, depending on what? Connection time, connection speed, kind of data accessible? Pay for each device? Is roaming within the property possible? Log out guests after a certain (idle) time?

Make sure you have the tools available to manage your bandwidth and check the coverage of your wireless network

To charge or not to charge – that is the question

How to handle the exceptions (since there is no rule without an exception)? All those questions need to be solved with the help of a flexible management tool.

Another important point is overall network quality. Just a few years ago the accesspoints were pricy, offering slow connectivity and coverage was quite restricted. The layout was focused on where the guests would use the internet connection which was supposed to be the desk.

It turned out, that guests really made use of the mobile nature of their devices and the whole idea of wireless and wanted to connect while sitting on the bed, out on the balcony and yes, even in the bathroom.

Too bad there was/is little or no coverage at all, at least for devices with weaker antennas than notebooks use to have (eg smartphones or tablets). So if you have designed your wireless networks a few years back, please check if you're able to fulfill decent connections based on the reality of today's use cases.

Even if you have strong accesspoints in place bear in mind that the possible available connectivity is divided by the numbers of concurrent connections handled by this accesspoint at any given time.

Strong accesspoint cover a large area which translates in many concurrent connections with rather limited bandwidth per connection. Providing

an accesspoint in every room not only solves this issue but also improves coverage and offers one more advantage: the possibility to create vlans per room.

Guest Internet potpourri

Regarding guest internet there are a few more topics more or less heavily discussed in the hotel management community. One which is still able to heat up the most tired debates is whether to **charge for internet or not**. On the one hand not every guest understands why he/she gets a good connection in a small 3star property for free but has to pay 15\$ or more per day for a worse connection in a 5star property where the roomrate is already 3 times as much.

On the other hand to catch up with the increasing demand and to provide fast and reliable connectivity in a 200 room (or more) property is a pricy thing to do. And given the increasing demand and the big room base some of the chains have on the market even 15\$ per day quickly adds up to real money. So why would they turn this revenue down if the market don't force them to do?

In my eyes this is the important part of the answer: will they recognize early enough what the market tells them to do? Are they aware how much potential guests already chose another option nearby who offers Internet for free? Not so sure.

Guests vote with their feet and you need very sensitive market intelligence to find the point where those 15 bucks additional revenue causes 300\$ missed revenue from a guest who would have come if you would offer him Internet for free.

As for today I would say the most reasonable approach in the foreseeable future is some kind of tiered pricing. Provide a basic connection for free – and don't think 128k is still enough for basics. I would suggest at least 256k or even 512k at this level. Even when it is free it should be a decent surfing experience and nobody should feel "pressed" into a higher paid level by an "unusual" slow connection.

But there is still a big usage gap out there, which gives some **room for differentiation**. Not everybody wants to stream videos (my mom sure not) just as not everybody wants to stay in a suite. Today I think most guests are ok if they have to pay for a really good connection which enables them to stream video and have a video skype session with their loved ones back home. Even more so if they are able to chose by themselves between a good free connection and a very good paid one.

The second quite common question is: do we still have to offer wired access when obviously the trend goes strong toward wireless? Short answer: as long as many of the big companies and many governments don't let their employees use wireless connectivity for security reasons I would vote for both options.

A third - sometimes overlooked - issue is how to make most out of your investment. If you have invested in bandwidth and good coverage why don't you promote it like hell? Many guests are frustrated by the service they get nowadays and the numbers are growing every day.

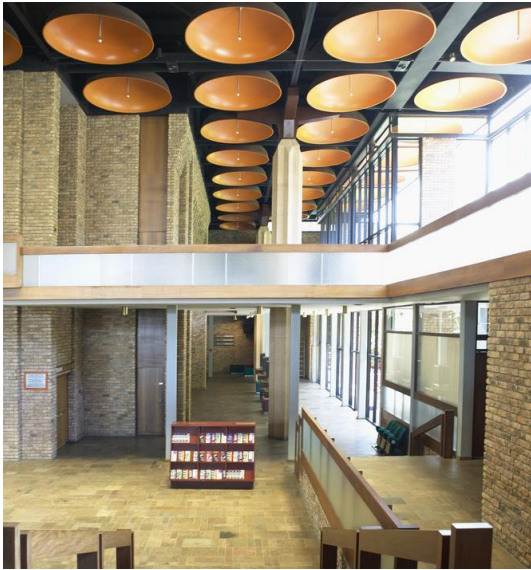
This is **a real differentiator**, and if the surveys give any indication it is a real important one. So please, don't promote just your newly opened restaurant or the size of your spa but let the world know what you have to offer regarding internet.

Speaking about promotion, please also use the splash page to inform about your services and/or last minute offers. This is a contact point = an opportunity.

And last but not least, having a very good guest internet networks is almost always associated with a good overall network infrastructure which for itself opens up a lot of future possibilities. Manage your staff, streamline business processes (eg room status notification), enable machine to machine communication...

I'm sure the technological evolution will offer more and more possibilities based on solid IP infrastructure.

If you offer superior Internet quality
promote it like any other asset



Connect your tech with your guests tech

Integrating guest devices

The sheer numbers of smartphones and tablets out there are already really astounding and still growing strong. Facing our guests using smart mobile devices is a real trend and nothing we can sit and wait until it's fading away.

So our guests are bringing their own technology. You have invested in technology. Is there a way to combine them?

Sure there is, and it is very straightforward. First, let them move the content they bring along or have access to via the Internet to your tech (= bigger screen, better sound). And second let them access your content and functionality (hotel info, order roomservice) on their tech.

The goals maybe straightforward, unfortunately the realization is not. Let's stay with the first part. Generally speaking there are two ways to let your guests put their content on your systems: wired and

wireless. I'd say today we live in a kind of transition period between those worlds.

The increasing number of electronic devices brought to the hotel room has born a new category of in-room tech within the last years: the connectivity panel. Is it really necessary? The two most common arguments against them are:

First: The majority of the guests don't use them.

Second: They won't be used in a few months from now because then everybody streams wireless.

Both are valid points. First, to be clear, a big HD TV set and very good wireless connectivity are certainly more important in-room features, those are the must haves. But as for today I would say a connectivity panel is at least a nice to have. With the constantly rising number of guests equipped with something to connect and the equally rising number of stored content (both, on devices and in

the cloud) I guess the usage rate will also increase. Especially the rising numbers of tablets may play a certain role here. Compared with a tablet which is a kind of “media hub” the phone is more the always nearby “communication hub” and therefore less likely to be connected (= captured) somewhere near the TV while you’re watching in the bed.

Second – as we will see later – to provide wireless connectivity for at least most kind of devices is still quite a challenge.

And third don’t forget **all those devices need power** – even more so when streaming wireless. On the other hand the hotel room is a favorite place to recharge them. So unless they aren’t charged by some induction technology – which btw would also need them to be placed on a fixed place – they are not completely “wireless” anyway. Having this in mind a quite broadly established but so far rarely known and used technology like MHL may be found more often in the future. This connects via micro USB to HDMI while charging the device at the same time.

Wireless challenges

Certainly, to connect ones device to the in-room tech wireless has its appeal. To be honest, this is quite an understatement. So why not use DLNA, Airplay, Wifi direct or similar technology to realize this amenity? Part of the answer is already in the question – no real established and broadly used standard

here either. Quite a few ways to chose from and none of them covers the whole variety of your guests.

To move on, let’s suppose we get some kind of tech working which provides at least Apple and Android users a way to connect. That is exactly where the next challenge starts. Connect to what? At home you are in your private surrounding connecting your device with your content to your device (since there is no other). In a hotel you are in a more public surrounding with a device not only in your room but in the rooms left and right from you too.

And even if you don’t care to make your whole content available for some part of the hotel some of your guests may not like the idea very much. To bypass this hurdle we would need to establish some kind of pairing systematic (number code, QR code, NFC?) to make sure your content stays in your room. Or more exactly on your tv because since it is transmitted wireless it virtually is not bounded by the walls of your room.

The problem is, most of the available standards out there (DLNA, Airplay) were build to connect as seamless and easy as possible and are therefore lacking any kind of pairing systematic. Easy to follow, because why should they complicate an experience made to be used in a private setting?

Be aware of the challenges associated with providing wireless connectivity for your guest devices to your in-room technology

So even if there are some trials out there to add some pairing systematic to one or more connecting standards the more comprehensive way would be to add some virtual walls to your hotel room. That is to bound the virtual content with virtual walls by the creation of virtual lans (vlan) per room.

At least today one more challenge remains. It is more and more common not to store content locally but to stream it from the cloud. That's why one would need internet connectivity and the preferred way is wireless. Maybe that connectivity is provided by some third party network or your own separated "guest internet network".

Let's assume to connect the guest devices to your in-room tech you use none of those separated networks but another - without internet. Most devices have one wifi adapter – already see the problem? To stream from the internet (Network one) you need one, to stream to the big screen (Network two) you need one too. So until our devices don't get a second wifi adapter there is a problem in this use case.

Facing those challenges, should you avoid to offer your guests to connect to your in-room tech wireless? No, on the contrary, I guess this is a very nice feature. But you should be aware of the challenges and have a close look how - if at all - your solution provider is able to handle those hurdles.

Deliver your content to mobile (guests?) devices

As described previously there is a lot to gain by using the screen already installed in each room for more than just TV. Essentially, all of a sudden you have a POS in every room.

But in these days it is by far not the only screen, there are more opportunities. Very high on this list I would rate all those smart devices our guests are so kind to bring along with them.

Sure, they are not 42" big. But they are more personal, accompany our guest already pre arrival, throughout our property and stay with them afterwards – all of which enlarges the possibilities to communicate with our guests.

And they provide really nice touch interfaces which is no disadvantage too. So if you already create digital content and functionality to be delivered through the in-room TV it should be quite self-evident to use every channel available. Content is already there, business logic already there, processes already there – lets go for it.

Next step: an app, we need an app. Really? Not sure about that. First of all, an app for what? iOS devices? Androids? Which version? Windows phone? And don't forget, still lots of Blackberrys out there. To take care of all those different versions would be quite an effort.

Do you really need a native app? In most cases an „app“ running in a browser is the better solution

Providing tablets in every room is costly but worth considering

It is not just to build them but to get them through the different app stores (with some of them having an evaluation process) and to keep them up to date. And last but not least, to really make use of them, your guests would have to download them to their device – a hurdle not be neglected.

Fortunately there is some common ground out there:

a browser. Almost every device offers a browser based on standard technology like HTML. Building your “app” to run in a browser not only makes it accessible by all of those different devices, it doesn't enforce your guests to search for, download and install it either. And new evolving technologies like HTML5 will even further expand what is possible to do within a browser.

Especially tablets offer some really nice options. They can be used to flick through your hotel services (instead of the printed compendium), make them bookable instantly and even to control the room settings.

Given all those advantages, wouldn't it be desirable to just provide tablets for all of your guests? Well that's worth discussing. The pros are quite clear: you can potentially reach all of your guests, not only those who already bring along their own device. A tablet placed prominently in each room also eliminates the need to make your guests aware of your “app”. And as for today it still has some “fancy factor” for a majority of your guests.

Unfortunately the cons are quite clear too: a pretty big investment for a “gadget” with foreseeable short replacement cycles. Fancy today, quite common next year, looking already somehow outdated the year after. Better be prepared to make some kind of charity activity with your tablets every 3-4 years.

Add to this some operational struggles (keep them updated, replace/repair damaged ones, discuss with your guests if there was one when they arrived and why there isn't one when they left) and you are facing real cost.

If the advantages are worth the effort can't be answered with a clear yes or no without having a look at your individual situation. It depends on your clientel, the services you offer (= the opportunities to add revenue) the possibilities already available (eg room control) and so on.

But one is for sure: the TCO of a tablet/room is only a tiny percentage of overall room costs – if every decision during planning, building and refurbishing would be made that cost conscious there would be money for a lot of tablets per room...



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