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So, you want a new tech stack

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The million-dollar question. Literally in today's high tech hospitality environment. How can I get a current technology stack? Or more accurately. How can I get from where I am today to a version of tomorrow? There is no easy answer to that question. No short-term realization. Only the first step in a plan. The plan to migrate from the old world to not the new world but the current world.

Suppose you have the rare opportunity to start from scratch. In that case, today is a great time to be in the market for building any technology environment, let alone one for the hospitality industry. Although the reality for most operational hoteliers today is that they cannot make a fresh start. The lucky person with an independent hotel and a from the ground up build. Fantastic opportunity. The small, medium, or large hospitality brand with the next project coming out of the ground. Not so much. An opportunity to experiment with a few peripheral aspects of technology. However, the ties to the mothership prevent any significant steps away from core technology that is mission-critical to the brand deliverables.

For those in the latter situation, it is a major undertaking rooted in a strategic shift of parts over time. Usually a long time. First one piece. Then the next, until over time,

What if you were in the position to take an unconstrained approach to technology?

the pieces of the puzzle start to resemble the current technology environment on offer in today's marketplace. Hopefully, the timeline between the start and the 'finish' is not too long before another major shift in technology occurs. Of course, there is no finish to technology—just a constant asset management process.

But what if? What if you were in the position to take an unconstrained approach to technology? Or more importantly, the type of hospitality business you wanted to operate. What would be necessary? What should be factors and serious considerations? How is the current and future environment for technology panning out, and what opportunity does it present to your business?

Let's examine the key elements that need to be considered when embarking upon such a journey.

THE CLOUD

You have heard about 'The Cloud'. You are using 'The Cloud'. If not somehow within your business, then almost certainly in your personal life. If you have a

... the cloud is like the second coming. The story couldn't be better.

phone with an App or two, then you are doing something in the Cloud. You have probably given this scant regard as you happily tap and share away on your personal devices. Yet, when it comes to the business world, there is a significant hesitation within our industry.

The truth is that there is limited logic to the hesitation. The Cloud is nothing more than the latest technological method of providing hard and soft technology to the masses. Once we had this technology physically present, visible and under our direct control and responsibility. Now we put that equipment and environment in at scale locations with people who know what they are doing and commit the financial resources to provide and manage this environment to the benefit of all.

What's in it for you? Everything. When we consider at the basic level that as an industry, we don't commit the human resources and expertise to technology resources that we really should, the Cloud is like the second coming. The story couldn't be better—technology readily

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available at a level of performance and technical availability we have not seen before. The best part is that beyond paying for your service for the pieces that you want to utilize, for the average hotelier, it is largely opaque. These days you don't have to look after the hardware or the software environment, and for a fee, someone handles all of this for you while you make use of the tangible pieces of technology—usually your software applications.

There are some caveats in specific circumstances and larger environments, but it is a positive step for most considering a 'move' to the Cloud. One not worth investing a serious amount of time in because no one is asking the hospitality industry where and how technology should be located, managed, and deployed. Get on with it and embrace the change for your benefit.

BIG TECH BECOMING BIGGER TECH

Have you noticed that for the most part, the only news we tend to hear about technology is about the biggest technology companies on the planet? If I asked you to name three technology companies, more than likely, it would be Apple, Google, and Amazon. Microsoft is still the biggest and probably not as top of mind for you as they once were. By the time we add in the Social Media giants and global application companies to this mix, there isn't much bandwidth left over for hearing about the smaller players.

> **You may even be of the mind that you want to avoid being exposed. Truth. You can't..**

The reason is that these tech behemoths just keep getting bigger. In every way. More data. More storage. More computing power. More applications. More consolidation. More products for increasingly more comprehensive parts of life and industry.

An example – Google does cars and self-driving vehicles, search, advertising, hardware, mobile devices and computing, data centers & cloud services, an infinite number of applications on a personal and business level, shopping, ISP and internet access, healthcare, voice tech, urban and municipal tech, scooters, rideshare, communication platforms, accommodation, travel, home services, prop-tech, payment, subsea cables, GPS navigation, AI, robots, energy, drones, wind energy, music, video, textiles, books, gaming, gesture-based controls, office automation, VR, infosec and cybersecurity, social and geopolitical tech, mapping and computer operating systems.

One of these spaces is enough for a company to tackle on its own. All these large companies have portfolios spanning far more reach than the core business they are known for.

The scale of these enterprises can be alarming, and you may even be of the mind that you want to avoid being exposed. Truth. You can't in the business world. Even if you actively choose to boycott one of these companies, the strong likelihood is that someone you choose to work with is using one or multiple of their products.

The secret. Embrace it for all the benefits that these powerhouses of research bring to your business. Big tech is making powerful technology affordable and available to the masses, and they are also making our industry better as well. They will continue to do so and will continue to penetrate more deeply into hospitality in the coming years.

INFORMATION SECURITY

It wasn't all that long ago that information security was something we didn't know much about. While there were efforts we took, it was often overlooked as a requirement or even something that needed to be actively managed. What do we need that for? What happened? In a nutshell, the internet came along. All the technology that was locked away inside a business and only used by the staff suddenly became connected to the entire world. A global pool of connected data and

systems just waiting for the opportunity to work out how to get access to it and take advantage of it. Once, it was all in hard copy and books. You recall the James Bond movies. Now it is a digital tome with unfathomable volumes of information.

As our industry is conservative and sometimes self-deprecating, we thought, who would be interested in hospitality and our information? It turns out to be everyone because information and our customers travel, spreading their digital footprints and duplicating information in various siloes worldwide. In some cases, highly insecure siloes that are ripe for picking. Our customers are often prominent and influential persons across a broad spectrum, and that information is attractive and valuable. Well and truly beyond the simple aspects of payment transactions.

Therefore, information security, the practice, and active efforts to properly manage your information are a must-have practice in your business. It's not just about GDPR and Payment security either. It is a disposition and a way that your operational processes are conducted across the business and how your technology environment is constructed.

BEGIN WITH THE END IN MIND - TAKING THE BLINKERS OFF

When you think about your business and technology, the objective is to visualize the type of working environment you want to create. If technology was not the limitation, how would you choose to run your operation and deliver the guest experience? An exciting question.

As hoteliers, one of our cringes is seeing things through the same lens. It is based upon environment and conditioning. We put on the blinkers and forget to appreciate that the world is changing around us. Something I hear often is that people are shopping for 'a new PMS'. Is that what you are really looking for, or is it just conditioning? If I were shopping today, I would be looking for a software solution that allows me to actively sell products and services for all my revenue centers and curate the complete experience for my customers around revenue opportunities matched with their personal behavior. Rooms are one of them. But it is not the only one.

For that reason, when embarking on your new technology stack, it is essential to envisage the type of business that you would like to be running as the «end». Focusing on your end state will automatically help you swiftly determine the technology that

can bring you to that type of a business environment. Too often, we begin from the prism of what the technology has traditionally looked like. That is not the limitation today, and you should most definitely not limit your own opportunity for something better.

ABOVE INDUSTRY TECH

When you consider the possibilities for your technology stack, do you actively consider technology that does not explicitly come from the hospitality industry? If not, you should.

Above industry technology benefits from the input of global user bases, industries, and revenue streams to fund development and, as a result, moves forward swiftly and brings with it incredible power. More importantly, it opens your business up to a global potpourri of technology we are not used to having in the hospitality sector. It's exciting to consider and bring to your business the type of tool that multinational organizations are using in their business.

Because of scale, it does not follow that these products are more expensive. Sometimes they are more cost-effective when factoring in the power they can bring to your operational environment. It's important to remember that as different as

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we like to think of ourselves in hospitality, we have much in common with mainstream industry. Much of what we do operationally is not dissimilar to distribution, manufacturing, and production style businesses. We most definitely have a tight synergy with retail, and the pandemic has made that even more of a reality.

THE FUNCTIONS OF THE HOSPITALITY BUSINESS

A business function is an operational component of your hospitality business that you are performing to bring your product and service to life. Beyond some specific examples where a type of product (e.g., food & beverage) is not offered to the guest, whether a 20 room Bed & Breakfast or a 3000 room Integrated Resort, all these business functions are performed in your business.

At TRAVHOTECH, we track more than 130 business functions that combine to make up the entire operation of a hospitality brand or hotel operation. At FOODnBEVTECH, there are more than 80 for a restaurant operation. In many cases, the business functions themselves also have sub-categories that roll-up. Business functions range across the operational domain of hospitality, from marketing to food and beverage and information technology. It's a comprehensive view of the parts that make our industry work.

> **If technology was not the limitation, how would you choose to run your operation and deliver the guest experience?**

We track this complexity because, in a modern technology-enabled world, it follows that a technology tool can and should be used to automate these business functions. Some scoff, but the truth is that you are undertaking this breadth of process multiple times a day in your business. The question is, are you undertaking these processes manually, or are you benefiting from automation?

Often the hotelier states that technology is not needed for many business functions. This is an option. However, what must be considered is that whenever a process is performed, it is very difficult to record what took place, ensure others are aware of what took place and act on it, have the history of what took place and then use that information to make better business decisions in the future. That is the power of automation.

> **... the ultimate objective is operational cohesion ...**

In the world we have grown up in, sometimes another human being was the answer. In a technology-enabled world with a connected customer, information is power, and information needs to be shared. The most effective way is to enable your business to function with technology.

BEST OF BREED & THE 130 TOOLS

I spoke with a customer recently, and they explained to me that to deliver their events capability, they used 13 software applications and just as many manual processes. 13 software applications for one revenue center of the hospitality business. We were speaking because the realization had come that this was getting their business and, most importantly, their customer experience nowhere.

When we consider the business realities of industry today and some of the specific challenges for hospitality, such as staffing, is it reasonable to expect that a member of staff or a department could master that many tools and leverage these to the best advantage of your business? No, it is not.

Following on from the previous topic of business functions, would you deploy 130+ technology products to support your fully optimized technology environment? The correct answer is no. Not because you can't do such a thing, but because it is operationally impractical and a

nightmare for your people to deliver.

As a result, we learn that it is necessary to consolidate our operating environment to be effective. Given a choice, how many technology platforms would you like to have to run your business? For most, the answer is one. Connecting beginning with the end in mind and the 130+ business functions, this is a great place to start when envisaging your desired state. Is one achievable? No. Not today. But several are possible, which is a vast improvement on 130.

The maxims are that you should strive for as many «one's» as you can achieve. In simple terms, this means that you will aim to identify tools that give you more technology and operational capability from fewer providers. Why? Because the ultimate objective is operational cohesion for your business. Operational cohesion does not eventuate from a jigsaw puzzle of technology solutions. It results from a limited few, and because of that few, you can bring to life in your business all that technology is intended to deliver. Productivity and efficiency. Increased customer satisfaction for your staff and guest leading to greater profitability. The primary purpose of technology.

When your staff work collectively on a unique set of business tools, communication is eased, automation is increased, points of failure are removed, single data sets are created, cross-business visibility is increased,

and information is consolidated to support business decisions now and in the future.

Terms you will often be challenged with are best of breed vs. best of class. This means targeted for a specific business function compared to addressing several business functions. You will be told that the best of breed provides the functionality you need. It is a valuable argument. However, if operational cohesion is your objective leaning toward 'one', then the approach does not take you toward that environment.

In today's digital world, the customer is as much a factor in your tool selection. Through digital technology, the internet, and apps, your guests have a direct impact and increased level of control over how they interact with your business. In short, they are increasingly looking after themselves. As a result, some of the functionality we once required is less necessary as customer expectations drive the behavior and functionality.

You will appreciate the challenges we continue to face in the industry for human resources. Across business functionality allows you to review the job roles in your business that bring to life products and services while simplifying your technology environment.

DO I NEED CONNECTIVITY?

One of the other daunting factors in the hospitality industry is the multitude of systems and connectivity between them.

A word you will often hear today, entirely misused, is 'integration'. It is used to discuss the connectivity between two systems. Two disqualifies the term 'integration'. Integration means one, which means one system that offers your business capability in a single environment. Therefore, if you have an integrated system, 'integration' is not required at all. If you do not have one system, then it will be necessary to have connectivity. The accurate term for this is 'interfaces', which means the connection between two disparate systems. Integration is a great marketing line, but it is a disingenuous term designed to make the generally aware (or unaware) believe everything is somehow 'together'.

Integration is far superior to interfaces, and wherever possible, choose integration. Integration means fewer moving parts, a consolidated working environment and singular data storage and access. Once again, operational cohesion.

If it is the case that integration cannot be achieved, and an interface is required between two of your technology solutions, then the following needs to be considered. The first is does an interface exist between the two systems? If not, it's probably wise to

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move on. If so, today, the current technological approach to interfaces is through an 'API'. Application Programming Interface is the meaning, and the word interface is part of the name (not integration). Beyond knowing that this is the current technical approach, and you should be buying current technology, it essentially ends there.

The next layer of this puzzle is what is known as interface hubs or, a more technical term, Service Bus. This translates to a typical environment (one) where information is moved between multiple interfaced systems. The best part of this approach is the use of the same information effectively between the systems. It provides a level of consolidated information because of the transmission of the pieces of data. Such an environment can simplify the technical aspects of connecting disparate systems and can also provide your operation with a useful information set that would not have previously been available—a great technology solution for information technology purposes.

Great technical solutions do not always translate to great operational solutions. The achievement of one environment for the movement of data is an excellent step. But to achieve functional cohesion for the staff who use the system, it is the business applications they use that need to be consolidated.

WHO'S DOING THE WORK?

Earlier, we touched on the guest's involvement in the overall technology ecosystem for hospitality. For that reason, we do need to reflect the guest's engagement with technology in its own right and then the impact that is having on traditional hospitality operations.

The digital customer is highly connected, expects to be highly connected

Integration is far superior to interfaces and wherever possible choose integration.

and has a level of control over the entire travel experience. Conditioning has already determined that often the guest will initiate their own booking and, as a result, also provides a depth of information that we used to try and prize out of them. Full contact details now come automatically with the booking removing process from operations. It continues through the check-in, stay and departure process, where in some cases, it may not be necessary for interaction with traditional hospitality touchpoints.

For this reason, your technology must consider the guest as another user of the environment. This adds further complexity to the overall technology environment and is also an ever-increasing scope of functional exposure to the guest. Operational cohesion would suggest that the objective is to find a solution to address the layers of technology access from internal staff facing systems to external customer-facing functionality.

BEST BANG FOR YOUR BUCK

Ultimately everything boils down to commercial reality, and technology is no different. However, in this case, it has been left until the end of the discussion. That is because it should be left until the end of the discussion. Too often, finances are the first consideration in building a technology environment or determining the right 'fit' for a piece of technology. Such an approach often excludes good solutions on price alone, when a great solution that fits your needs will be well worth the investment. It's important to remember that technology providers also understand the marketplace and are motivated to price their products at a level that businesses can afford. Resist the temptation to lead the search on finances.

To make your buck go even further is an exercise in economies of scale. Buying technology is no

The process of procuring technology for your business is the act of buying assets.

different to buying anything else. One of the advantages to the 'one' approach is that the consolidation of technology products from fewer providers creates the opportunity to develop a commercial model that works for everyone. One product leaves little margin to be creative. A cart of products provides the opportunity to balance the commercial offering. In short, good business, which is what everyone ultimately desires to achieve.

Finally, approach your technology with an investment mindset. The process of procuring technology for your business is the act of buying assets. These assets will be the process that your business runs on. They are valuable and, if chosen well, will last your business for a decade or more. There are no costs involved. Only investments.

WHAT DO WE KNOW SO FAR?

Here's a summary of the key learnings we've discussed.

OPERATIONAL COHESION	The objective
YOUR END STATE	The starting point
CLOUD	Good
BIG TECH	Good
INFORMATION SECURITY	Important
ABOVE INDUSTRY TECH	Try
ONE VS MANY	One
INTEGRATION	The preferred state
INTERFACE HUBS	Smart technical solution
GUEST TECH	User of your technology
DOLLAR & CENTS	Leverage economies of scale

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PUTTING IT INTO ACTION

The next step is to translate the learning into a modern technology stack. As identified at the outset, it is a considerable task for a myriad of contributing reasons. At the same time, this should not be a factor that daunts you. The sooner you begin, the sooner you will move toward a current technology environment that will bring business value to your hotel operation.

All roads lead to Rome. However, not everyone's journey will take the same route. The road to technological utopia has many paths. Your path will be determined by multiple factors specific to your business and how you can leverage the current with the future. Another core factor is the process or order of things, which will once again be specific to your business and your technology and operational environment.

Your organizational capability and the existence and experience of your technology leadership are crucial factors influencing success. To the detriment of the outcome, many hoteliers discount the scale, scope, and asset purview of technology in hospitality. This is a dangerous underestimation, and I hope this article demonstrates the same to the interested reader. Anything mission-critical to your business is something that requires business oversight. Technology is critical to today's hospitality business as it is the process of our business. It will increasingly be the case. There will only ever be more technology.

For most hospitality businesses, change management to a current technology environment will take time. This is due to the volume of technology, time to deploy and related change processes around such

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a venture inside your organization, along with the investment aspects. There is a reason the term digital transformation has been coined.

However, sitting still is not an option as technology, and the industry passes your business by. There is no island of bliss in the technology world. The time to start is now, and you have everything to gain as an outcome.

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Mark Fancourt is the Co-Founder of TRAVHOTECH, the next generation technology consultant for the modern hospitality & travel world, hiGuard.io, a forward-thinking approach to hospitality information security within the complexities of the hotel operations environment, FOODnBEVTECH, helping restaurants & bars make the right technology choices and Testbed Vegas, the nonprofit for hospitality & travel technology in Las Vegas.

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